

THE TIMES

Higher Education

SUPPLEMENT

'Nil growth' plan could mean Lanchester cuts

by David Hencke

Lanchester Polytechnic could be affected by a nil growth budget being considered by Coventry education authority which would reduce its education spending by £1.3m in 1976-77.

Confidential budgetary forecasts were put before a special governors' meeting at the polytechnic on Wednesday. These show that the authority is seriously considering a budget which would have nil growth and have to absorb all inflation during 1976-77. If inflation continued to run at 20 per cent this would mean a cut of £1.3m during the year.

The proposals come immediately after neighbouring Loughborough had decided to impose a nil capital programme for Leicester Polytechnic which means cancelling a student housing project worth £268,000 and already approved by the Department of Education and Science.

The document before the governors says: "The implications for public spending have become increasingly severe over the past few months. In November 1974, the Chancellor of the Exchequer stated that public expenditure would be limited to 2.75 per cent growth per annum over the next four years. Since then, the economic situation has gradually worsened and the April 1975 budget reflected this by further cuts in public spending.

"In view of the seriousness of the economic situation a further alternative is for the implications to be examined of absorbing all committed growth and inflation that may occur in 1976-77 within the budget provision."

The authority has asked that expenditure be investigated on a 1.5 per cent growth rate, on a nil growth rate and on a nil growth rate including absorption of all inflation.

The polytechnic governors have been asked to consider plans on the proposed building programme for the polytechnic, including transfer of facilities from Rugby to Coventry.

The report adds that although the polytechnic has a reduced student target of 6,500 in 1981-82, there is now little hope of this being met unless there is an expansion in student numbers in 1976-77. "The rate of growth of student numbers in the future will depend upon the resources which are made available to the polytechnic," he said.

The education committee of Leeds City Council is to cut its budget by £2.1m. This is part of a 3 per cent overall cut in expenditure. The new higher education institution in Leeds, consisting of the polytechnic, the James Graham College and the City of Leeds and Carnegie College, is likely to suffer a £200,000 to £300,000 cut in its budget.

Degree validation powers will go to colleges, CNAA says

by Frances Gibb

The most important change facing the Council for National Academic Awards in the next decade was the transfer of degree validating power to the colleges themselves, Sir Michael Chapman, the CNAA's chairman, said this week.

Speaking at a CNAA degree conference in London, he said he saw no reason why the academic staff of polytechnics should not validate courses, particularly as they were often already on the academic boards of their own colleges.

"We hope to move speedily to a situation where institutions can scrutinise new courses, looking to the CNAA for almost automatic approval," he said.

Among the advantages of this transfer would be a reduction of the growing administrative burden on the CNAA involved in submissions and correspondence.

In its first year it had about 4,000 students reading for more than 80 approved courses. This year it had more than 61,000 students following 871 courses.

It had been predicted that the CNAA would award one third of all the degrees in the United Kingdom in another decade, but, he said, one could not be sure of this. However, the 1972 White Paper had envisaged a growth resulting in 20 per cent of the age group being in higher education, equally divided between universities and other colleges.

On this basis the CNAA would increase severalfold and it would seem unlikely to plan growth of less than two to three times its present size in the next decade.

The Duke of Edinburgh, retiring president of the CNAA, received about 65 graduates from most of the country's polytechnics who had recently been awarded the council's degrees. He also received 18 students awarded research degrees and three students awarded doctorates.

He conferred honorary degrees on Sir Derfan Christopherson, vice-chancellor and warden of Durham University, Sir William Goldstream, vice-chancellor of the University of Ulster, and Sir John Gifford, vice-chancellor of the University of Lancaster.

Professor Jean Piaget, professor of child psychology at Geneva University, and Professor George Rochester, professor of physics at Durham University.

Looking for the silver lining

continued from page 1

1973, said that the university world was becoming completely philistine; very soon it would merely be an extension of the sixth form.

By most standards, Manchester University is doing well. It won the Universities Central Council on Admissions "golden disc" for the most student applications this year, the library is pressing for copyright status in recognition of its comprehensive collection, and the University's share of the 1975-76 grant award means it will be able to fill all its vacant posts—but only with one year appointments.

Salaries are unquestionably the single greatest cause of the anger and loss in morale in the university, but anxieties about the future are related more to the threats to research, postgraduate numbers, and promotion.

Professor of sociology—who has a label on his desk proclaiming "Expect a miracle" but who sees no silver lining to what he describes as "the latest crisis of capitalism"—says: "We believe we are flexible and innovative, but the pressure on every aspect of university life is now so bad that we are running desperately in all directions trying to find a technical answer to problems that can only be solved by extra resources."

While Mr Prentice has aroused the fiercest antipathy in the university (and its alleged suggestion that universities should sell their art treasures to make ends meet has now passed into the mythology), Lord Crowther-Hunt seems a shadowy figure to the younger academics but a more sinister menace to more senior academics. Dr F. W. Bewick, executive dean of the medical school pointed out: "He has said in as many words that the universities have been naughty, and his answer is to put pressure on their resources and on academic salaries."

David Laidler, a professor of economics who sees such a grim future in Britain that he is emigrating to Canada, warned that Lord Crowther-Hunt's premonitions seemed to indicate the destruction of university autonomy, adding: "Either he doesn't know what he is talking about, the most likely explanation, or the implications are very sinister."

"I can see a situation developing where Oxford and Cambridge will be reserved for the children of rich left wingers and other universities will be left without research or post-graduate—mere technical colleges. He seems to be saying is that you can have high salaries, but at the price of giving up everything else."

Two hurt as Cambridge sit-in forces new nursery talks

Cambridge University is to reopen discussions on nursery facilities for its members after an eight hour occupation of the Senate House in which a student and a proctor were injured.

Two hundred members of the Nursery Action Group occupied the Senate House after the council of the senate, the university's highest executive body, had turned down proposals for a nursery scheme on financial grounds.

The students suggested a £10,000 programme for fully staffed nursery and crèche facilities for university students and non-academic staff, for which there is a substantial demand. The vice-chancellor, Professor Jack Linner, agreed to put to a meeting of the council of the senate a proposal for a joint working party of academics, representatives of

university trades unions, and NAC.

The occupation ended when the students agreed not to bring their own food, and to leave the Senate House by 11.00 p.m. The students' union, said that the university had not reversed its position. "It has certainly come on both main points."

When the occupation began, R. L. Tapp, the senior proctor, pushed to the ground and bruised hands were cut and bruised. "It was a forced entry, supported the aims of the action group before this happened but when it comes to the Senate House, I was against it." Later a student injured in the leg when he spiked on railings outside Senate House.

Job prospects are 'normal'

London University graduates can expect their job prospects in 1975 to be "at least at normal level".

The mood of London's careers advisers for the coming year is described in the report as one of "cautious optimism". In all fields the great majority of graduate recruits have expressed their intention of maintaining normal levels of intake.

Only 245 of the university's 1974 first degree recipients were believed to be unemployed at the end of that year. Graduates who had found jobs or further training places totalled 5,713.

The trends among those who got first or higher degrees in 1974 tend to confirm the general increase in graduate entry into the public sector.

New diplomas granted

The Council for National Academic Awards is to approve six new Diplomas of Higher Education courses. These will be at Uddersfield Polytechnic, where the course will be linked with BA honours humanities and BEd combined studies courses; at Portsmouth linked with a BSc honours in combined studies; at Oxford linked with a modular degree course; at Wolverhampton linked with a humanities degree course; at Ulster linked with a BA combined humanities course; and at Gravel and Alaguer College of Education, linked with a BEd course.

UCCA drops fee plan

The Universities Central Council for Admissions has decided to drop a proposal to introduce a £2 applicants fee for all candidates applying for admission to universities. The council has agreed that universities should be asked to pay an increased application fee for 1975-76. The fee will be £10 for each candidate admitted, an increase of £2 on the old rate.

£10,000 'freeze'

Mr Derek Robinson, chairman of the Social Science Research Council and former deputy chairman of the Pay Board, suggested this week to the Royal Commission on Incomes and Wealth that the salaries of those who earn more than £10,000 a year should be frozen.

It was possible for everyone to maintain their living standard in the present economic climate, he said, and the higher paid were better able to accept cuts in their living standards than others.

Union votes 'Yes'

The Oxford University Society voted by 493 to 92 in a debate on the Common Market on Tuesday that this House would say "Yes" to Europe.

PNL academy structure is agreed

The new academic structure of Polytechnic of North London has been approved by the Department of Education and Science and will come into effect by October.

The new structure reduces polytechnic's academic board to 39 members to 50, and is based on faculties rather than departments.

Teaching staff are to have a say in academic affairs and representation is to be reduced to 33 per cent to 20 per cent. The new structure, however, is still high in the league of representation on polytechnic academic boards.

Issuing its second (and official) report, the Joint Inter-departmental Education and Science Advisory Committee hopes to bring about a "reorganisation" of the academic board, which will be a "committee of management" for the British Council, said Mr Peter Davies, a spokesman for the British Council, said many colleges would welcome the overseas students to fill their empty places, particularly if they paid the full economic rate for their courses.

Every level of further and higher education is likely to be involved in the scheme, from postgraduate level to the training of craftsmen. The full economic rate may vary from about £3,000 a year for a medicine degree course to about £800 a year for basic English teaching. The details of payment have yet to be worked out.

Projects in the pipeline include a £30m scheme with Iran by which Britain would train 500 technicians, 1,000 craftsmen and 100 instructors a year over the next five years. One of the 21 projects planned with Saudi Arabia is a £10 million scheme over the next five years in which Britain would investigate the need for educational technology, and supply the appropriate hardware. Another is a £10m scheme for a Saudi funded college in Britain to serve as a base to form links with British colleges and universities. A redundant college of education may be used.

United States and Iran, page 12

THE TIMES

Higher Education

SUPPLEMENT

June 13, 1975. No. 191

Price 12p

Education-for-oil deals mean £60m bonanza for Britain

by Frances Gibb

As much as £60m may be reaped by Britain over the next five years from education and training projects with oil rich countries as a result of the new Paid Educational Services scheme (PES) started by the British Council.

Under PES, universities, colleges and polytechnics in Britain will help many developing nations to mount educational projects as part of a package deal which includes contracts with British industry for design, construction and equipment.

About 30 multi-million pound projects have been planned so far in Saudi Arabia, Iran, Venezuela, Oman, Qatar, as well as non-oil exporting countries such as Greece. As a first step towards establishing PES, the British Council has set up a special unit of three council officers, directed by Mr Eddie Hale, senior former director of the council's Middle East department.

The main advantage for universities, polytechnics and colleges, who face an annual stream of overseas applications, will be that they will have an agency and a clearing house based in the British Council.

Such an agency would also help the countries concerned. "Our clients do not like dealing with individual institutions and academics, and it is possible would like to find themselves a reliable agency, acknowledged by the Government, which has the capacity to manage and coordinate a variety of input from overseas countries. We're honest brokers, if you like," says Mr Peter Davies, a spokesman for the British Council, said many colleges would welcome the overseas students to fill their empty places, particularly if they paid the full economic rate for their courses.

Every level of further and higher education is likely to be involved in the scheme, from postgraduate level to the training of craftsmen. The full economic rate may vary from about £3,000 a year for a medicine degree course to about £800 a year for basic English teaching. The details of payment have yet to be worked out.

Projects in the pipeline include a £30m scheme with Iran by which Britain would train 500 technicians, 1,000 craftsmen and 100 instructors a year over the next five years. One of the 21 projects planned with Saudi Arabia is a £10 million scheme over the next five years in which Britain would investigate the need for educational technology, and supply the appropriate hardware. Another is a £10m scheme for a Saudi funded college in Britain to serve as a base to form links with British colleges and universities. A redundant college of education may be used.

United States and Iran, page 12

One of the 21 projects planned with Saudi Arabia is a £10 million scheme over the next five years in which Britain would investigate the need for educational technology, and supply the appropriate hardware. Another is a £10m scheme for a Saudi funded college in Britain to serve as a base to form links with British colleges and universities. A redundant college of education may be used.

United States and Iran, page 12



One of the 21 projects planned with Saudi Arabia is a £10 million scheme over the next five years in which Britain would investigate the need for educational technology, and supply the appropriate hardware. Another is a £10m scheme for a Saudi funded college in Britain to serve as a base to form links with British colleges and universities. A redundant college of education may be used.

Mr Fred Mulley is surprise choice as Secretary of State for Education

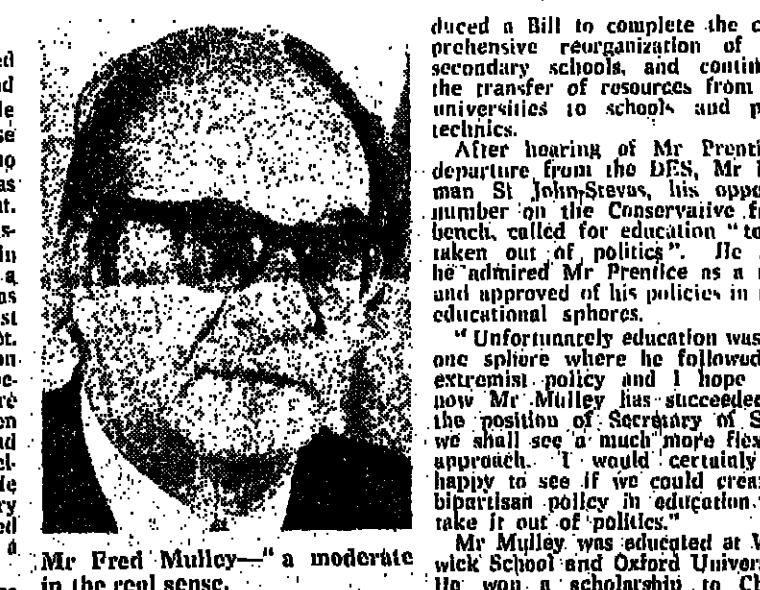
Labour MPs fear substantial cuts

by Peter Hennessy

Mr Fred Mulley, 56, was appointed Secretary of State for Education and Science in the Government reshuffle on Tuesday night. In a surprise move he replaced Mr Prentice, who resigned his seat in the Cabinet as Minister of Overseas Development.

Mr Mulley, described by a ministerial colleague as "a moderate in the real sense of the word and a civilised, intelligent man" was promoted to the £13,000 post and a seat in the Cabinet. He previously held the position of Minister of Transport at the Department of the Environment, where he was understood to have been unhappy about cuts in the road building programme and the cancellation of the Channel Tunnel. He pressed unsuccessfully in January for his responsibilities to be moved from the DOR and placed in a separate ministry.

His appointment to the DES was greeted with dismay in some Labour and Conservative circles. It was interpreted as a clear hint from the Prime Minister that substantial cuts would be made in educational spending in the coming months. Since Mr Mulley has the reputation of being a weak departmental minister, it was suggested that Mr Wilson was "letting him on to" what he considered the "softest" of the Labour Party after its annual conference in the autumn, when he would accept a pension and make way for a younger man in the major Government reshuffle expected at the end of the year.



It was said that Mr Prentice was "too strong a minister to permit substantial cuts" in the education budget and disappointment was expressed by some Labour MPs that he had not been replaced by Mr Wedgwood-Benn. Mr Benn would probably have resisted cuts, introduced a Bill to complete the comprehensive reorganisation of the secondary schools, and continued the transfer of resources from the universities to schools and polytechnics.

The 'degree' that did not count

by Tim Albert

A young businessman has been refused admission to an MSc course at Westfield College, London, because his first degree is not recognized by the University of London.

The case was discovered during an investigation by *The Times* into unrecognised degree-granting institutions in Britain. The businessman's first degree was awarded by "Dr" Bruce Copen's "Sussex College of Technology".

Mr Abdul Sultan Hassan, 24, says that his correspondence course at "Sussex College of Technology" cost him about £70 and lasted about three years. He studied on average two hours a day, but cannot remember the names of his tutor.

Mr Hassan, who was born in Uganda, is the son of an import-export man now working from Canada. He lives in a large house in Wembley and looks after the English side of the business.

He says that he had four years in Katus school, Sussex, where he gained four O levels and two A levels. Because of his business commitments he was unable to go to university full time, and heard of the "Sussex College of Technology" course from a friend.

He says that he received several textbooks and notes, took a two-hour examination in mathematics at the college, and graduated in June, 1974. He also met "Dr" Copen, whom he remembers as a "nice man" in his late forties or early fifties.

Mr Hassan says he did not realize that the course was unrecognised until Westfield College rejected his application. "I don't feel bitter or cheated," he says. "I can't use the degree for business, but I use the letters after my name. I just like studying mathematics."

"Dr" Copen told *The Times* that he would not comment and put down the telephone.

Degrees without tears, page 9

United States and Iran, page 12

United States and Iran, page 12

United States and Iran, page 12

Contents

Phoney degrees

An investigation by Tim Albert of the colleges that sell worthless degrees, page 9

Inequality
Dorothy Wedderburn reviews *The Economics of Inequality* by A. B. Atkinson, page 16

Morale
"There is still a sense that the future of scholarship is under attack": Alan Cane in Manchester, page 8
Joel Hurstfield, pages 6 and 7

Chemistry
Three pages of chemistry book reviews, pages 19-21

Devolution
David Walker reviews the options open to Scottish universities, page 10

Promotion
John Saville, in the Academic Freedom column, discusses the efficiency bar, page 7

PNL
The fate of Mr. Miller, page 28
Mr Miller's speech to the Association of Vice-Principals in Technical Institutions, page 3
CNAA visit, page 4

Noticeboard 11
US news 12
Overseas news 13
Letters 14
Books 16-22

Joel Hurstfield 1976

from Paul Moorman VIENNA tence and work of the 336 member

The Minister said he saw an academic difficulty in the different compositions of polytechnic and university policy board, but welcomed a scheme in Bristol where a special joint committee linked the

Trade unions plan protest lobby against Government cuts

by Sue Reid

A mass lobby of Parliament is planned by the south-east regional council of the Trades Union Congress in protest over proposed cuts in education expenditure. The council wants the Government to rescind the economies and spend more on education.

Support for the lobby came at a special conference on education cuts called by the council in conjunction with teacher and student unions. More than 180 delegates from throughout the south-east voted unanimously in support of the action and urged members of Parliament, councillors and trade unionists to support their campaign locally for better education.

The conference motion declaring full support for the lobby outlined the campaign's aim to inform Parliament and the general public of the grave concern felt by the regional council about the future of education in Britain.

Mr Jack Dunn, a member of the National Union of Miners and chairman of the south-east regional council, made the call for a link between trades council county associations and teachers to get the campaign established. So far response from the trade union movement generally had been low.

He was given backing by Mr Stuart Mackenzie, secretary of the council, who said everyone should be made to know the situation fac-

ing education. Answering a call for strike action from some of the delegates Mr Mackenzie said this, as in any industrial dispute, must be a last resort.

Mr Roy Jackson, of the TUC's education department, said education was bound up with the basic purpose of trade unions. Both enhanced the opportunities of working people. He expressed concern over the closure of colleges of education and stressed the need for them in working-class areas.

Non-mandatory areas of education were underlined as a particular danger zone by delegates. Mr Jackson said he could see a breakdown of the structure of the adult education system in this country and criticized the means-testing of married students on their spouse's income. He said education would always remain an important priority of the TUC and called for action at a local level among regional TUCs and trades councils.

Mr Bill Bosden, education secretary of the Association of Teachers in Technical Institutions, also expressed concern about non-mandatory provision. The cuts could spell the end of adult education.

He pinpointed cuts in part-time staffing as a threat to adult education. "In very many parts of the country these sorts of measures will result in the closure of courses, withdrawal of opportunities for a great many students and will produce a reduction of education provision and deterioration in the type of provision."

"In terms of provision of courses

and education environment a reduction in staffing must have consequences of grave concern to students and all concerned with them," he warned. Speaking of the south-east situation, Mr Bosden claimed those who already got a minimum in education benefits were being squeezed again.

He called for students not to be sold short and said the campaign to get the cuts rescinded should be extended into the labour movement as a whole.

Dr Marcus Merriman of the Association of University Teachers said there had been a failure in educating the general public of the critical importance of education and no one had failed more than the various institutions of higher education. If the comprehensive school system was underfunded large numbers of students would not be prepared for university. If universities were curtailed the secondary education system generally would be warped.

The declining child population statistics were a perfect opportunity to achieve essential education reforms, said Mr Sam Fisher, chairman of the National Union of Teachers' education committee. Now the Government had chosen to adopt stringent economies at a time when major achievements could be made.

This point was taken up by Fred Smithers of the National Association of Schoolmasters. He said the irony of raising the school leaving age was that no sooner was it put into operation than damaging education cuts threatened.



Students at Manchester University, including many taking their degree finals, are protesting about the uncomfortable examination conditions which have literally brought some of them to their knees.

Their complaints have been taken up by Mr Dave Carter, the Student Union Education Officer, who claims that some of the lecture theatres being used for the examinations are entirely unsuitable for the purpose, in particular the Arts Theatre in the Geography Building (pictured above), where the seats are too far back from the bench-type desks and the desks are

too narrow to hold the examination papers.

He is intending to take up the matter with the Registrar's Office, and has threatened to declare some of the rooms 'go' areas unless something is done.

A spokesman for the university said: "We are looking to the complaints. The Arts Theatre is not an ideal place for exams and we understand that a recent refurbishing has made the situation worse. But we have not had any complaints from a vast majority of students. An examination time we have a find about 1,600 places, and it is not easy."

PNL improvements for CNAA visitors

by David Hencke

Substantial improvements in the academic structure and staff development plans of the Polytechnic of North London are to be presented to the Council for National Academic Awards when a team visits the polytechnic today.

The visit was requested by the CNAA after a critical report by one of its visiting parties in 1973. At the time the report said that members were dismayed at how little progress had been made to integrate the polytechnic and were critical of the unwieldy nature of the academic board and lack of library provision and computer facilities.

This time the CNAA want to see a strong academic and physical development plan and to seek reassurances about the polytechnic's arrangements for the welfare of students.

Today's visit also follows preliminary visits to examine faculty and student facilities which were made earlier this year.

The main 114-page report to be presented to the CNAA says: "The reports from the committees of the academic board show that the academic board itself is now firmly established and working well in its central roles of formulating academic policy and maintaining and controlling the academic standards of the institution."

"Arising from the CNAA comments there has been considerable discussion of modification of the academic structure. This work has resulted in proposals recently approved by the Department of Education and Science, to reconstitute the academic board with a maximum membership of 50."

"Linked with these proposals there will be changes in the faculty boards to give greater representation of courses and a systematic revision of the course committee structure."

"Perhaps the most important aspects of these changes will be the downward devolution of responsibility to faculty boards and course committees to give them effective 'teeth' at the appropriate level of policy and decision-making."

The report adds that some progress has been made to consolidate development on one site in Holloway Road, although this has

not been much attention. Two detailed reports are given on the coordinating and advisory committees and the course approval committee. Both committees are shown to have wide responsibilities and can stimulate cooperation throughout the multiple situation.

Since October 1972, the course approval committee has considered 40 courses in outline or in submissions. Thirty-two of the have been through the entire polytechnic approval procedure and have received approval from the side validating bodies.

The report also gives a detailed breakdown of student numbers and an analysis of whether departments are overstaffed.

The breakdown of student numbers shows that while the faculties, like economic and administrative studies, have modest growth (although not at expectations) others fall. Law, the faculties which declined, and humanities and environmental science and technology have fallen from 867 to 905 sandwiched in 1974. Total numbers in the polytechnic fell by 250 between 1973 and 1974 instead of a planned increase of 200.

Among the overstuffed departments in the polytechnic are ministry, electronics, environmental design, language and law, librarianship and social studies. Those which are understaffed include biology, geography, mathematics and teaching studies.

Among examples of overstaffing are 52 staff employed in a minimal degree when only 39 are required; 39 in librarianship when only 35 are needed; and 37 in language and literature when 28 are needed. Sociology has 28 staff when 15 are required. Understaffing examples are teaching where 44 are needed and mathematics where 24 are employed to cover the work of 37 people.

Student amenities are shown to be short of what is desired although there are planned improvements in student accommodation and improvements have been made to the students' union offices and to the main entrance

Don's diary

Into Europe

Referendum. Voted "Yes" for congeries of reasons, positive plus negative. Mostly positive: historic-cultural-economic-political. We are an insular breed, and some of the Benn-Shore-Powell little-Englanders stuff made one squirm. Continentals dangerous hotheads, not used to democratic institutions; unstable lot—not like we British, nurtured in 1,000 years of liberty, our constitution the envy of less mature democracies in Europe. As Powell spoke, Leeds fans unspooling up a Taxis stadium, dancing on car bonnets, breaking café windows, reeling back to England, drinks-sodden. A connexion between the Benn-Shore-Powell line and the Leeds fans: "Wogs begin at Calais". If Europe drags us out of that attitude for good and all, that alone would be worth all the economic and political arguments put together.

As for that "loss of sovereignty" argument, suppose we had voted to come out. In a few years' time a tattered Britannia with begging bowl outside EEC headquarters, the bowl held out to an emerging Eurocrat, making for his Mercedes. Brief dialogue: Britannia: "Yes, I'm on my uppers, but at least I keep my precious sovereignty, my virgility." Eurocrat: "As a matter of fact, madam, we didn't really plan to deflower you, but here's 10 francs, and the best of British luck."

Back, then, to the Scriptorium and prepare for the slog. About 30 scripts is absolute maximum before needing a turn around the room, or better, around the garden when at home. Necessary, in order to escape from the tedium of so many candidates answering the one question that maximizes the vagueness quotient and allows the sweeping generalization. In the garden, observe that the apple trees need spraying—white fungus, recent dry spell. Honey-suckle now giving off pungent aroma. Conjure more interesting questions for examinations in divers fields of learning.

Q1. "Ilions towers are truly topless." Does the quotation derive from Milton or from the entrance passage to a Sopot nightclub? Locate the passage and comment on the sensibility displayed in drawing on your own reading in the particular area.

Q2. "Whereof one cannot speak thereof must one be silent" (Wittgenstein, *Tractatus*). So why didn't Wittgenstein belt up?

Q3. (Logic Paper.) Should Question 3 be re-phrased less ambiguously?

Q4. Write short notes on two of the following in the Italian style: Bilbo, Dildo, Dado, Dada, Daddy.

Back to the scriptorium. I am in the wrong racket.

"Mon dieu, mon dieu, la vie est, la, simple et tranquille..."

On defensive

General Board of Faculties, 2.30 p.m. Student representatives keeping up the flow of requests/demands/objections. All based on the Endleigh Street Theatres from Feuerbach, marked "TOP SECRET, NUS"—not to be rifled from the files by Broad Left, not even on basis of pamphlet written by Trot Creeps. If stolen, call in police. Heads of Secretaries, vice-chancellors' Committee, odd addressee professor, etc. and above all, blame CIA.

Para 1, sub-para c(1) of the Theses reads: "Always keep university senates and academic committees

to expose what goes on elsewhere and an academic duty to turn a blind eye to what goes on under our noses. When we act, and particularly when our actions matter, suspension of disbelief is mandatory. We can not have a society of free minds and free will. And we can only be effective provided most of us believe that the sector of reality framed by our blinkers contains all there is to see. If too many people peep suspiciously around the edges we are all of us undone. That is why peep behind the curtain can only be played in other people's houses. Casualties are fewer when we fasten our blinkers on. Let's pretend "is a safer game and there is reason in this fantasy. The triumph of reason can sometimes be brought a little nearer by an agreed pretence that it has already occurred."

The first commandment of bureaucracy is: let us mutually agree that we are each and all engaged in a rational activity. For the sake of action and agreement we ignore the fragility of human processes, communications and perceptions. Those who recognize the underlying fragility are even disadvantaged, because they are haunted by irony.

To see bureaucratic language as a restricted code cutting off half the reverberations and resonances of human action and social processes amounts to a serious disability. At best you can only use the code in the spirit of parody, whereas those who accept it as the



Wedged—or Wedgled.

tees on the defensive. Never let students see to act on behalf of the state, but really on, and always reacting to poor proposals. Never lose the initiative. Remember the golden rule—when it comes to standing on principle, anywhere, any time, don't always find it expedient to drop the principle just for this particular occasion. Forward with the revolution.

Hence the endless requests/demands. Last term nurseries for married students who could not wait to give the nation the benefit of superior genetic endowment. Hence duty of the state to take care of progeny. This term's issue: resident team of psychiatrists and GPs needed to minister to students suffering severe trauma of reading books, putting out the milk bottles, using public transport, trains at reduced fares, working a 30-week year on highest pay than old age pensioners' subsistence for 52 weeks, pro rata (work it out). Next year's number one NUS issue—British Airways to provide free vacation flights to Greece, Rome, America, for all students, to enrich the experience of rationality, bureaucracy, NUS mandated to start negotiations now.

Did I say "Wedged"? Yes, if Harold is looking for a re-shuffle and Wedge says it's education or nothing (firm up the youth vote: stitch it on to the workers). Besides, Reg. Trentise is dangerous—moderate speaking for moderates. And when the staff-student ratio is 25:1, and no research whatever is being done in the nation's higher vocational sector, Harold will bring out his prepared text, nicely timed

Jam tomorrow

Arbitration—pay award. Jam tomorrow, soon after economy collapses entirely.

Blindfold pretence of bureaucracy

It is as to the manner born. They are never crippled by inward laughter at themselves and others. They do not and cannot exchange glances based on more private meanings. Bureaucratic terms of reference mark the edge of their world and so they act confidently and effectively within it. Indeed, they can be real persons within it because all of reality lies inside those terms of reference.

Every frame imposed on the real breeds an appropriate speech. Bureaucratic speech is roundabout and uncommitted. The "I" hides behind the "one"; clear and distinct ideas about the world are rephrased as "impressions". "I know" becomes "one has the impression". "I remember" is converted to "my understanding was". The imperative "indicative and personal become the impersonal and subjunctive. Bureaucracy proceeds in the subjunctive mood and multiplies qualifying clauses. Direct speech is forbidden; bureaucratic speakers must, by indirections find directions out.

They grasp things so to speak, by an image, and as is with the broadest possible terms. They operate in a world of perhaps and conceivably, may be and might be, would it not and could it not. Adverse judgments retire behind a mask of "with all due respect" and "that may well be so but". Ignorance is clothed in the desire for a little clarification. "I don't know" for equally "I very much suspect" becomes "I am not quite

Five years now I have been a committed man. Soon I shall discharge that duty and return to my opus proprium: scholarship, and the meeting of minds. But I have not wasted my time. My duty has been my advantage. Even a prisoner of bureaucratic rationality can observe the times and seasons. I observe first that what I now propose to do is "not" done. Analytic scrutiny of our own activity

for, say, late June when the universities have dispersed for summer and Jesus is crucified.

Extracts:

"I want to be frank about these new measures with every university teacher in the country. We British are always at our best when we have our backs to the wall, and whilst I realize the measures of the past 18 months have been very severe and unpopular—but I've never been one to seek cheap popularity just for its own sake. Whilst, as I say, I know these measures are severe, really severe—and I've never said they wouldn't be (since this is my first speech on the subject)—what I do know is that every university teacher in the country will accept them in the proper spirit, because they want to do their bit for the nation just like the rest of us, put their shoulders to the wheel and all the rest of it..."

On the air

Monday: Parliament broadcast for the first time in history. Question time, House of Commons, 2.30 pm. Radio 4. BBC audience ratings estimate 2,107 listeners, mostly upstairs with the mop, not near enough to switch off; plus 656 dogs, 47 parrots, 38 budgerigars.

Question to the Prime Minister, the Rt Hon Harold Wilson. "To ask the Prime Minister if he has sold his cottage in the Isles of Scilly, and if not, whether it is socialism to have a house in Lord North Street, a country house in Bedfordshire, a stately home at Chirtwell, and a large empty house above the office in Downing Street?"

Prime Minister: "I'm glad the Honourable Member asked that question. This Government has always said—and I want this on the record—that second homes are a disgrace to any civilized country. We have never said anything at any time—and I invite the Honourable Member to examine the record—about the national interest in second homes. What I do say—and let's be honest about this—is that if the social contract exists, then a Government doesn't need to preach the need for one; but that if it doesn't, no amount of preaching will bring it about, since the Government has already lost the consent of the governed. What was it John Locke said—I think it's around page 74, second paragraph if I'm not mistaken—you could look it up—I may be wrong..."

Major surgery

Down we go, then. We will be told the ghastly truth before the end of this year. Mr Hesley is about setting the scalpels ready, and Mr Crosland has been preparing the patient for major surgery. October at the latest. Meantime, have a good vac...

Ossian

prevarication, ambiguity, judicious forgetting, the manipulation of agendas and minutes, the shifting of meetings to inconvenient hours, and above all by the nice balance over time of gold pro quo. Bureaucratic conformity is ultimately achieved by giving and receiving.

What most people know cannot be raised as public knowledge because of the shared guilt, because of the offer and the withdrawal of the smiles, and because the quids have been exchanged for the quids. So the exploitation and the vindictiveness and the manic grasping at power and status are pressed down to the level of private knowledge, leaving the surface of reason bright and clean.

The bureaucrat looks into that surface and sees there his own nature. He sees. And having colluded with mere appearance each, bureaucrat then colludes with each and every other in a mutually reflecting system of rational confidence. The shared colour of red ensures that everyone can be brave in the face of white and allows all participants to join in an audition to whiteness.

The ritual leader whitens the doctrine of impured whiteness which the participants accept and ceremoniously return. Bureaucracy washes whiter, purer, denser. And nobody, nobody, is exempt from the taint of impured whiteness. The pretence is stronger than the reality. It has to be. Bureaucracy, like justice, can only operate blindfold.

What cannot be secured by agree-

What went wrong with the universities?

A personal retrospect by Joel Hurstfield

A couple of months before the February election of 1974, I had a chance encounter with two members of the opposition who are now senior Ministers in Mr Wilson's Government. In the course of an hour's conversation the discussion turned to the universities, about which each of them had formed strong and unfavourable opinions. "I never accept an invitation to address a meeting at a university", one of them said. The other, less I should have noted the point, gave me the reason in a coarse metaphor which said in unmistakable terms that a university environment was a squalid, depressing experience from which a politician returned humiliated, angry, without an apology regret or assurance that the universities both cured for and—more important—would defend freedom of speech and assembly.

And yet, fundamental as this issue must always be, what they said reflected a deeper mood, a climate, a sense of hostility towards academic institutions, an alienation of the community from the universities.

I have often reflected on what I was told that evening and on the profoundly changed attitude of Labour intellectuals and indeed politicians of all parties towards the universities, of which this was but one example. How had this come about? This article is an attempt to suggest some of the answers in this question.

I began my career shortly before the war in a small provincial university college. The history department, of which I was a member, had a staff of three and this was the pattern throughout the arts, and most of the science, departments. Our teaching duties were heavy; some 20 hours a week over a wide range of courses, and a beginner's performance had to live loud to mouth. I would sometimes go to bed at two in the morning (knowing that my 9 o'clock lecture was not yet fully prepared) with my alarm set for 7.00 a.m.

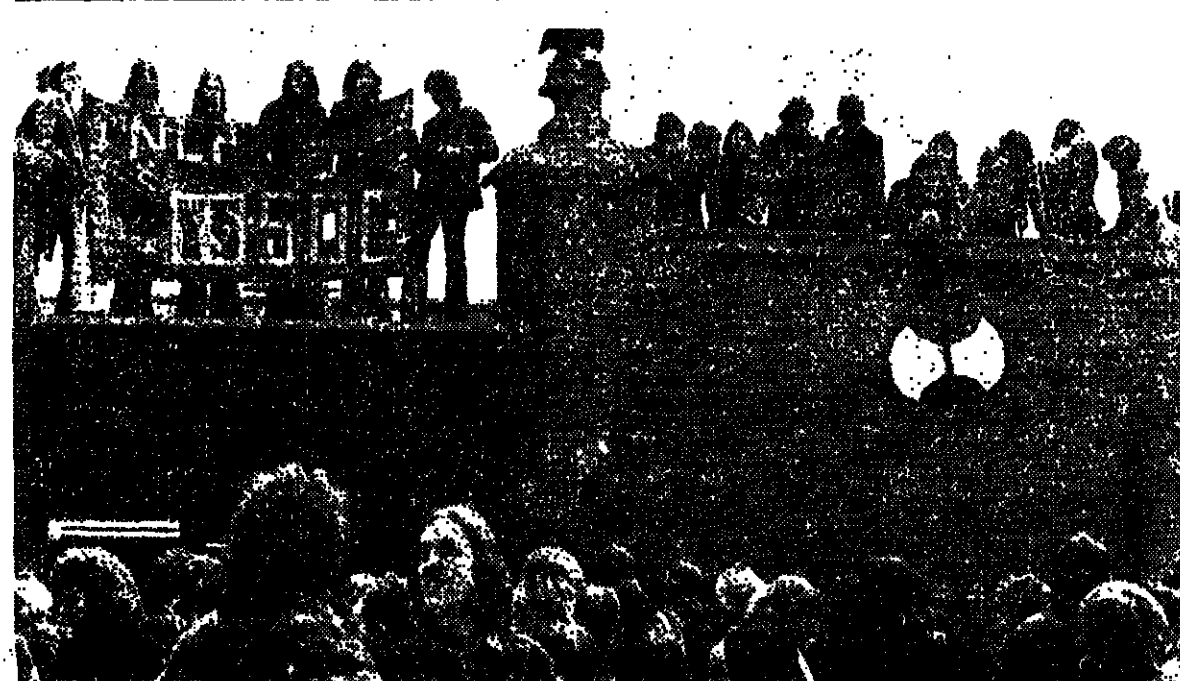
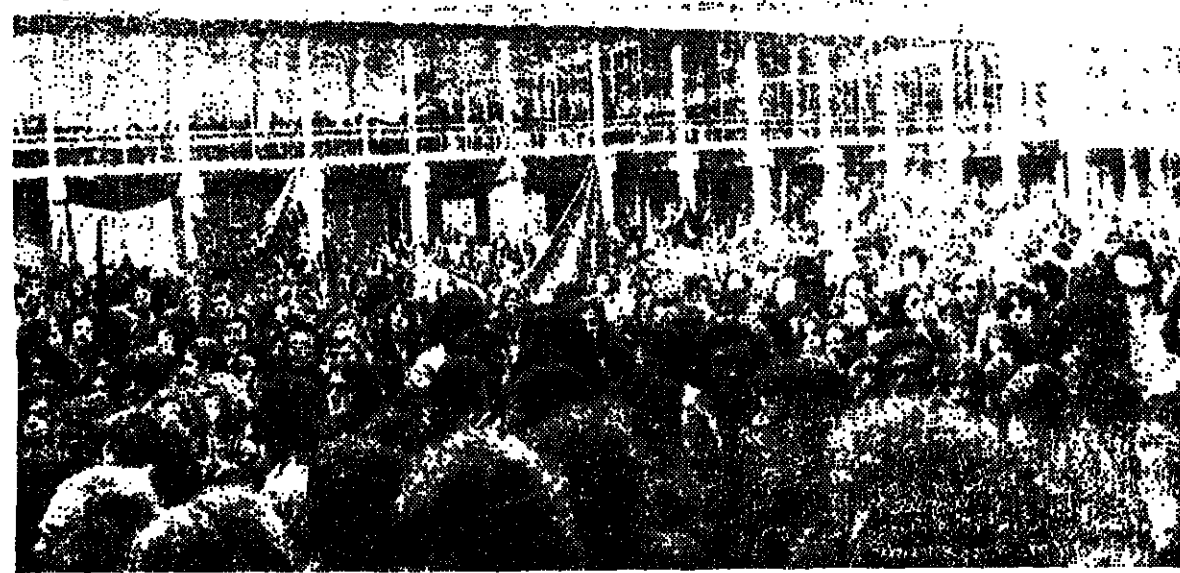
But our students were few in number, about 250 undergraduates for the whole college, and they had been falling for some years. As a newly appointed lecturer, I was told that, if numbers continued to fall, my appointment would not be renewed, the college would lose the financial support of the University Grants Committee, be taken over by the municipal authority and converted into a technical college. It was not a welcome prospect to the academic staff to whom it was perfectly clear that some of the city fathers coveted our buildings more than our company. We were well aware that, as a profession, we were not loved.

In the town itself, apart from a cultured and sympathetic minority, they used to speak with veiled tolerance of the people "up at the college". They believed that we were arrogant, underemployed, intellectual, living comfortable lives with long holidays; that we could only rouse ourselves sufficiently to deliver unconvincing political speeches attacking the deployment of Neville Chamberlain or damaging the fabric of established convention; and some of our critics welcomed the prospect of taming us down to size.

Plus ça change. All this happened long ago. Yet today the industrial workers, the newsmen, the headteachers (the Secretary for Education?) would, if called upon, probably express the same discouraging sentiments about us and our work as did their fathers a generation ago. Is it in the nature of the academic profession that it should inevitably arouse jealousy, be misunderstood, derided and, in times of crisis, demonized by its political opponents as well as by some of its most ardent spokesmen?

I do not think so. I do not believe that there has been a consistent pattern to university developments during the past 30 years. There have been two important phases when the universities stood high in the esteem of the community as well as of the government, and when the prospects were exciting. But the rest of the story has been one of missed opportunities, want of judgment, failure of nerve and, in some cases, loss of faith by the universities themselves in their own inherited purpose.

It would be difficult these days to speak to some of the high places in the state—said in the universities—about the ideals of the independent pursuit of knowledge or the



Three views of student unrest at Essex and Oxford.

Why should an embattled nation living on dwindling resources, so it is said, provide for an elitist society where personality cults flourish, patronage has decayed into the self-perpetuation of coteries, where extravagant self-inquiry passes itself off as literary research and where students manage somehow to be both idle and violent?

It must be said at once that the picture given in the last paragraph is a gross misrepresentation of university life but that is the picture in many people's minds.

What then went wrong? The whole story is not yet known but we can at least detect three main stages in post-war university development. The first lasted nearly two decades. It witnessed the recovery of the universities and then their expansion. Anyone who taught at a university at that time will speak of those rewarding, exhilarating and demanding years as the best years of his life. We were lecturing to men and women who had experienced the realities of war, who had lived with hardship, danger and destruction and who knew now what they wanted: a good education, and after it, a worthwhile career in the world of peace.

The cheerleaders came and went but their spirit remained.

secure and respected; the syllabus retained their traditional pattern. Candidates for admission were plentiful but academic jobs were few. The days were long and money was short. The work was hard but the life was good.

Then world-wide famine, abrupt, with the publication of the Robbins report in 1963. There is no necessity here to consider the bitter controversy which led to an enlargement of the programme, or, in arguing for example, about whether more would mean worse (in my view a neutral question as it worked out). We lost sight of the fact that more would mean different. For it led not only to an enlargement of numbers, but to an enlargement of diversification of the syllabus. There was a shift in balance. The social sciences, hitherto stopgap of the arts, now vastly extended disciplines many students and teachers, some of them of real ability, enthusiasm and commitment. If there was any truth in the notion that universities were still ivory towers, these and related developments were like loads of gunpowder placed against their walls.

This emphasis on the social

ant as some think; but it had an especial significance in making explicit the question which was implicit in the Robbins report: what is the role of the university in society?

It is a commonplace that every community which enlarges its size reflects this change in two respects. For institutions grow more elaborate and it becomes much more closely involved with the state. The universities provide a classic example of this process: they were "bureaucratized" and "politicized". It may be that these developments were inevitable. I am concerned here only with their consequences.

When I was an undergraduate, the president of the students' union and a secretary, but an ancient voiceless on which he tapped out his letters, with one finger. As a result he was not tempted to write too many letters and even less likely to send out lengthy messages of solidarity with the oppressed peoples of the world. Now, in the expansion period, the president's work and interests increased and diversified; and he needed to devote all his time to it. The subtextual, it was claimed, was the answer.

But a student is a man who studies. To pay a man not to study so that he can represent all the other pro-

me to raise some interesting questions. This is meant as no criticism of the many fine men and women who became presidents of unions. It is merely cutting them off from their grass roots support, their known desire to serve the whole community of students, to cut off—and with a year's subside on their hands—they began to enlarge their sphere of activity, to often in worthy causes and to altruistic motives. But all this called writing letters, to other union presidents, to vice-chancellors, to the press. It meant attending a great many meetings, going on delegations, appearing on television, negotiating with government departments.

It is easy to criticize these developments from the standpoint of the traditional organization of the universities. The fact that students, many of whom have always had strong social consciences, now had to become deeply involved in social causes is not something to condemn. Some students whom I knew used to go once a week to clean the floor of sick and elderly people; and they were better students for that. Others preferred to make speeches and pass resolutions as, in a free country, they have every right to do. And some resorted to violence, to speech and action, discovered its frailty and ambiguity of a species of academic liberalism fashionable in high places.

What aroused the criticism of students who talked to me about unions is not their politics as such but their irrelevance. The average student, as uninterested in the daily life of the outside world as he was in the when studying the sixteenth century, in the comparable conflict between the Calvinist conception of the sacrament and the Zwinglian interpretation. For him the fierce controversy over the Marxist scripturalism conducted in college unions and played at NUS conferences was nothing more vigorous than prolonging youth.

At the opposite end of the spectrum the Committee of Vice-Chancellors had little interest in the daily egeities going on in the NUS. As they had developed problems of their own. Like the NUS the Committee of Vice-Chancellors perhaps grew larger, their business more complex, their system more formal. Some vice-chancellors, like some union presidents, became public figures and media spokesmen who earned a second reputation in the press and in Whitehall comparable to the reputations they already had in their own universities.

All these developments publicized and dramatized the work of the NUS and the Vice-Chancellor's Committee. A university was no longer a place where isolated communities of scholars and scientists, students and teachers, but a usable component in television programmes, computing with other branches of the entertainment industry. In the process the universities themselves became more visible. Many people have wondered at the situation at Essex, which was exacerbated by its uncomfortable proximity to Fleet Street and the Independent Television News. At about this time a TV producer approached the president of the union at my college and asked him for "six long-haired scruffy but articulate students" for a programme. To the president's eternal credit he told the TV producer to go to hell.

Even the Association of University Teachers, an amiable, occasionally bullying, gathering of men and women of goodwill, began to ask itself whether it could or should continue to go naked in a world of which bureaucracies were everywhere and multiplying on all sides. The integration of local AUTs into parts of the administrative apparatus, it can be expected that a more standard practice will become usual. There is a general point that must be emphasized from the outset. Inflation has made the passing of the promotion bar for any one individual much more urgent than ever before. The incremental scale, which lecturers ascend by itself not steep enough to match the rates of inflation of 1974-1975, and a failure to pass the efficiency bar will now mean the beginning of a sharp decline in living standards.

It is reasonable to assume, therefore, that those who are refused promotion up the scale will regard the "stop" as a good deal more

serious than did their predecessors; and we may expect, other things being equal, rather more acrimony. We do not know, of course, whether other things are equal; and the Campaign for Academic Freedom and Democracy has no evidence at the moment for the country as a whole, where the universities are tending towards stiffer conditions, or not. What is certain are the financial hardships which reviewing committees will now impose upon those who fail to meet the criteria laid down.

Coming now to procedures, the first point that needs to be insisted upon is that administrative matters give voice to both the lecturer and the head of department that an efficiency bar review will be coming on to the agenda. This is most important; and an 18 months to two years' warning should be given. An adequate warning means that departmental heads have the opportunity for a serious consultation with the lecturer concerned. If there is likely to be a recommendation that the lecturer's retention should be put in question, it is essential that the lecturer be given a chance to put his case. In most cases, indeed in the overwhelming number of cases, this relates to research and publication. It is worth noting at this point that it is rare for lecturers to be held at the promotion bar for either teaching or administrative reasons. The efficiency bar will now mean the beginning of a sharp decline in living standards.

It is reasonable to assume, therefore, that those who are refused promotion up the scale will regard the "stop" as a good deal more

What went wrong—the way forward

Continued from page 6

what age, in what subjects? Should the cost of education be borne by the state or the individual, or should there be diverse systems existing side by side? How much shall we spend on education?

All these are political issues and, in a democratic society, the decisions must be taken by the politicians. I emphasize the politicians—not the civil servants. A civil servant should be, and is, immune from personal attack because he cannot defend himself. But granted this, he should also remember that, sheltered by his immunity, he should not delight in inflicting humiliation on men, some of great distinction who, at half his salary, are working at least as hard as he is.

While these various processes were in train, events thousands of miles away, and in no way connected with them, were to have an enormous impact on universities in the western world. In 1964 the students at Berkeley, California, having grown tired of standing up for their rights, decided to sit down for them. We had entered the era of the university sit-in and the confrontation.

Let it be said at once that American students had a cause, or a series of causes which, though they could not justify or legitimize violence, could help to explain how it came about. They were protesting about freedom of speech, about poverty, about racial injustice and all these were given a sense of immediacy by the Vietnam war, during which students, like other men, lived under the shadow of conscription for a cause in which they did not believe. I was in the States during part of this time, and every so often one could read in the local papers lists of young men whose "caskets" had been brought home to their parents. Some of them had gone out a few months before to be corrupted or killed in a far eastern nightmare.

It was natural that, when the American campuses took fire, some of the sparks should catch on elsewhere. It was natural also that as the semi-professionalists began to move into student agitation, the whole movement gained an international dimension. I don't mean that the agitators were part of an international conspiracy. It was not needed. The newspapers and television, more speedily than any agitator, carried the good news and

visual examples for all to see and imitate.

In 1968 in Paris, Mr Cohn-Bendit showed how quickly one could demoralize the authorities of a great and ancient university. There were legitimate grievances against a tradition-bound system but nothing to justify the destruction of the Sorbonne which Mr Cohn-Bendit boasted was his aim. Similar episodes were enacted elsewhere in France with more enduring effects. In Italy the universities, reflecting the deep conflicts within society, passed through massive upheavals from which they show no immediate prospect of recovery. The same is true in some places in Germany. But what of England?

In student matters the London School of Economics became the best site for probing the capacity of the universities to defend themselves; and the events at LSE were re-enacted in many other universities and colleges throughout the country though the scenarios were varied according to local conditions and opportunities. The presiding authorities and their academic colleagues were understandably taken by surprise. Some panicked; some aging academic Peter Pan's drank for a brief moment the heady wine of youth and embarrassed their friends and critics alike with the ardour of their revolutionary zeal; some resisted the cowardice of a minority of their seniors and the follies of a minority of their juniors and helped preserve so far as they were able the inherited traditions of academic freedom. In the protracted struggle nobody gained, everybody lost.

The universities all over the world have been tardy in introducing long overdue reforms. Now they were reckless in abandoning tried and established standards in academic affairs. Worse still they acquiesced in the destruction of academic liberty and on occasion negotiated as representatives of a defeated power, with the student politicians who confronted them.

Things are undoubtedly quieter now and I would be sorry if the tide turned so sharply that reasonable requests were turned down merely because in the past unreasonably requests were promptly met. I was sorry that the recent NUS handbook on methods of university occupation was not countered by a solemn warning that occupation, disruption, the prevention of free speech and assembly would be considered an attack on



Students "grew tired of standing up for their rights so sat down for them instead."

academic liberty and the rights of learning and would be treated as such. And I wish that visitors to universities could be assured of any guaranteed, freedom and security. The road back will be a hard one.

I want therefore briefly to state my purely personal view about what I think necessary to shorten the road and lighten the burden. In a sentence I would say that while political ideals and principles must, and should, remain influential, those organizations and individuals concerned with universities should also be powerfully influenced by the ideals of education itself.

I believe that while the politicians and civil servants dealing with higher education must as always remain responsible and responsive to Parliament and the electors for what they do, they should also conduct their affairs with due regard to the

liberal and enduring qualities of education itself, free from any desire to impose old scores or impose rigid ideologies.

I believe that vice-chancellors carry the heaviest burden. For they share with their academic colleagues the responsibility for preserving a great tradition of learning. They will need to affirm and reaffirm the single-minded evolution of their universities that every threat (what ever its origin) to freedom of speech and assembly will be stubbornly resisted. They will also need to say that no society or government can impoverish academic studies without debasing the arts and sciences themselves. And it is prudent also to remember the old saw that he who supps with a politician should use a long spoon.

I believe that academics should press for the preservation of academic standards as well as their standards of living and work; and they have an Association of University Teachers which could be truly representative. But their interests will not be advanced, or their principles sustained, by imitating the postures of some trade unions or giving over the governance of their affairs to career trade union organisers who have not a clue of what universities are about and would convert the association into a flat, dull, over-administered union of "white collar workers", as they are pleased to describe its members. The paradise to which they would lead the association is the Trades Union Congress.

I believe that the NUS would vastly gain by insisting that membership should be on a voluntary basis, not enforced by a compulsory levy. They would probably find that the membership would be larger than they expect and considerably larger than the existing caucus. One of their many gains would be that they would again be in close contact with working students.

Finally a declaration of faith. If I have referred critically to some of the developments after Robbins I should make clear my view that the Robbins expansion was right. I would go further and say that we have too many places at universities but too few. I would like to see in this coming age of reduced hours of work in industry, early retirement and increased leisure, much closer contact between the universities and the community. By that I mean not simply through public lectures and extra mural courses (though I should like to see more of these) but full degree courses

that men and women could start in their fifties or sixties, not for professional advancement but because to study literature, or history or languages or the sciences can add to the quality of life. The Open University is doing this work extremely well. So can we.

I would like to see the universities open their doors still more widely to students from the continent, as well as from non-European countries. Again, I stress that we have too few places, not too many. We shall have to expand not contract.

To meet this changing pattern of admission and the diversity of qualifications I believe that we shall have sooner or later to introduce the foundation year comparable to that of Keele, or of the Scottish universities, or of some American institutions. If this happens we shall free ourselves from the tyranny of requiring two Bs and a C—or whatever are the mystic symbols—which cry aloud to be relaxed. In any case circumstances will force us to do this as the result of the inexorable move towards the (almost) universal comprehensive school. The pupils will be just as good: it is simply that they will not be qualified in the manner which produces two Bs and a C.

I have said enough in this article to provoke criticism from many who hold established and well tried principles about university education. Those who hold them are my colleagues and friends whom I respect and admire; and I seek no controversy with them. All I am concerned to do is to test established doctrine to see how far it can hold the line in the 1970s and 1980s. Apart from this, my answer to the small minority of defeatists is that we have precious commodities which we are uniquely able to provide. It is not in our interest, nor is it right, to disperse what we have done and can do. We belong to an honourable and learned profession.

The serious danger which faces us is that, in the name of economy the whole fabric of our university system could be damaged beyond repair. In these dark days of crisis, more than at any other time, it is necessary to reaffirm the basic principles of academic life by which we live.

The author is Astor Professor of English history at University College, London.

John Saville examines the promotion procedures

The painful price of failing to pass the bar

Last month Professor Saville discussed some of the problems connected with probation and tenure. This week he comments on the similar procedural question of the efficiency bar.

Promotion/efficiency bar procedures are invoked when university lecturers reach a certain point on the salary scale. Usually this occurs within five to eight years after tenure has been granted. There are, normally, three criteria for assessment. These are teaching ability; administrative competence (by which is meant adequate performance of administrative duties requested by the departmental chairman or head); and evidence of research, both publication and ongoing research.

Practice over the country as a whole varies quite widely, but with the integration of local AUTs into parts of the administrative apparatus, it can be expected that a more standard practice will become usual. There is a general point that must be emphasized from the outset. Inflation has made the passing of the promotion bar for any one individual much more urgent than ever before. The incremental scale, which lecturers ascend by itself not steep enough to match the rates of inflation of 1974-1975, and a failure to pass the efficiency bar will now mean the beginning of a sharp decline in living standards.

It is reasonable to assume, therefore, that those who are refused promotion up the scale will regard the "stop" as a good deal more

serious than did their predecessors; and we may expect, other things being equal, rather more acrimony.

We do not know, of course, whether other things are equal; and the Campaign for Academic Freedom and Democracy has no evidence at the moment for the country as a whole, where the universities are tending towards stiffer conditions, or not. What is certain are the financial hardships which reviewing committees will now impose upon those who fail to meet the criteria laid down.

Coming now to procedures, the first point that needs to be insisted upon is that administrative matters give voice to both the lecturer and the head of department that an efficiency bar review will be coming on to the agenda.

This is most important; and an 18 months to two years' warning should be given. An adequate warning means that departmental heads have the opportunity for a serious consultation with the lecturer concerned. If there is likely to be a recommendation that the lecturer's retention should be put in question, it is essential that the lecturer be given a chance to put his case. In most cases, indeed in the overwhelming number of cases, this relates to research and publication. It is worth noting at this point that it is rare for lecturers to be held at the promotion bar for either teaching or administrative reasons. The efficiency bar will now mean the beginning of a sharp decline in living standards.

It is reasonable to assume, therefore, that those who are refused promotion up the scale will regard the "stop" as a good deal more

There is, of course, a certain amount of chat about the importance of competent teaching, but it is not taken very seriously.

What is wrong with much practice at the present time is that adverse reports are made within the last month or two before reviewing committees meet, and there are times when they come as a surprise to the victim.

However, rational arguments and rational procedures must sometime or other come to be accepted for there is no just reason for withholding the details of an indictment that may well have serious consequences for an individual's career. If there is an argument for confidentiality in this present context, it would be helpful to have it stated publicly.

What we are concerned with here is a small minority of cases, mostly individuals who for various reasons have published nothing, or who have not published enough, or who are unable to satisfy the reviewing committee about their current research programme.

How do committees evaluate "enough"? And is unpublished work taken into account? In some subjects these days—perhaps in a majority—it is becoming more difficult to get work published, either as a book or in periodicals; or the length of time between submission of an MS and publication is increasing.

When departmental heads make their recommendations, whatever they may be, they are obliged to be specific and detailed, and the lec-

turer being reported on must know the full statement of the case. This is a suggestion that is not at the present time normal practice, and it will be strongly resisted.

Most heads of departments are steeped in the confidentiality that infuses much of the business in all the tertiary sectors of education, and any suggestion that "confidential" reports on members of staff should be made available to those staff will be opposed by many senior academics.

There remains the question of an appeals procedure. Adverse reports are not always concerned with research and publication problems; they may, on occasion, reflect personal antagonisms. But whatever their content, there must be a right of appeal against negative reports by a departmental head which are upheld by the reviewing committee. And the defendant must further always have the right to be accompanied, at the appeals hearing, by a person of his own choice.

It can sometimes be a daunting business to have to confront your own head of department, especially if personal questions are involved, and an outsider who is not directly concerned can be expected to be of help both to the lecturer who is on appeal and to the appeals committee.

In one sentence, the general case that C.A.F.D. is arguing on matters such as course and promotion is for more open and clearly defined procedures. What is needed to assure these things is the formation of a public opinion, by debate, argument and controversy.

With the beginnings of the cancellation of periodical subscriptions by libraries—a melancholy business that may well grow in the next few





Academics demonstrate outside the Manchester museum on the AUT's "Day of Action" in protest of their pay claim.

Manchester fears that freeze could damage the fabric of scholarship

Manchester University is in better shape than many other British universities. It has a magnificent academic staff as yet undiluted in quality by the post-Robbins expansion. Jack Diamond, professor of mechanical engineering at Manchester since 1953, a member of the University Grants Committee from 1965-73, and Manchester's pro-vice-chancellor, said of his younger colleagues: "They are as good as they have ever been and better; they work jolly hard".

Furthermore, the university had the foresight to freeze academic posts a year before everybody else, and the effectiveness of its "Save University Energy" campaign, symbolized by hasty Sue, finds expression in buildings unlit and unheated when outside temperatures are close to zero.

But there is still a sense that the fabric of scholarship in Britain's largest provincial university is under attack. Departments were this week preparing their preliminary submissions for the 1977-82 quinquennium in a state of uncertainty and foreboding. Professor Frank Musgrave, head of the education department, said there was a "miasma of uncertainty—the university felt threatened by the implications of statements made by Lord Crowther-Hunt, Minister of State, overseeing higher education, and Sir Frederick Dainton, chairman of the University Grants Committee.

Departments have been asked to prepare their quinquennial plans within the reduced target of 10,700 student places expected at the end of next year. They have been asked to:

- Assess the past quinquennium and decide which of the developments identified for economy reasons should be priorities for the next five years.
 - Plan their developments within an overall target of 12,500 students by the end of the 1977-82 quinquennium. "To see," as a senior administrator remarked, "if 12,500 can work".
 - Justify all planned developments academically, cost them, and if more space is required, explain how it is to be obtained.
- Space and time—both of which cost UGC money to provide—are the resources which most come under strain when money is short. The John Rylands Library and the Manchester Museum both need new space desperately. The library is the most comprehensive in the north-east, and is pressing for copy-right status, which would make it only the fourth university library to be so recognized. It was to have had a £3m extension last year, but this was deferred in the cuts. It is now top of the university's list of building priorities but books continue to pour into the old building at the rate of 50,000 a year, and the result is that certain parts of the building are overfilled.
- Fire and public safety officers are already concerned. When does the building become hazardous? "It's dangerous now from a structural point of view," Mr. J. B. Roberts, deputy librarian, said, and added: "By the time the extension is built we will be able to fill it immediately."
- Books are going out to store, but in the old medieval library rare and ancient texts have to be stored in a dank cellar in a drying atmosphere which ruins pages. Mr Roberts

fears for the safety of past scholarship in the shape of his valuable book stocks, and for the future of scholarship as well: "I wonder what is to become of academic publishing in the present economic climate."

It is the condition of present scholarship which casts most gloom in the university, however. Professor Peter Worsley, dean of sociology, pointed to a new feeling of tension in his department caused by increasing competition for study leave, postgraduate students, and university research money. He said that people worked harder to overcome the shortfall in resources, but became more prickly as a result. An elaborate quantifying exercise was already in progress in his department to ensure that no lecturer was expected to take an unfair teaching load at the expense of research.

What really hurts, however, is the feeling that research and scholarship is no longer valued by the Government, Whitehall or the public.

What the Government says about the universities is simply not true. This feeling of distrust is associated particularly with Mr. Prentice—at least among the younger academics—and to a lesser extent with Lord Crowther-Hunt. Minister of State, overseeing higher education, and Sir Frederick Dainton, chairman of the University Grants Committee.

Departments have been asked to prepare their quinquennial plans within the reduced target of 10,700 student places expected at the end of next year. They have been asked to:

- Assess the past quinquennium and decide which of the developments identified for economy reasons should be priorities for the next five years.
 - Plan their developments within an overall target of 12,500 students by the end of the 1977-82 quinquennium. "To see," as a senior administrator remarked, "if 12,500 can work".
 - Justify all planned developments academically, cost them, and if more space is required, explain how it is to be obtained.
- Space and time—both of which cost UGC money to provide—are the resources which most come under strain when money is short. The John Rylands Library and the Manchester Museum both need new space desperately. The library is the most comprehensive in the north-east, and is pressing for copy-right status, which would make it only the fourth university library to be so recognized. It was to have had a £3m extension last year, but this was deferred in the cuts. It is now top of the university's list of building priorities but books continue to pour into the old building at the rate of 50,000 a year, and the result is that certain parts of the building are overfilled.
- Fire and public safety officers are already concerned. When does the building become hazardous? "It's dangerous now from a structural point of view," Mr. J. B. Roberts, deputy librarian, said, and added: "By the time the extension is built we will be able to fill it immediately."
- Books are going out to store, but in the old medieval library rare and ancient texts have to be stored in a dank cellar in a drying atmosphere which ruins pages. Mr Roberts

prefer Manchester to any other teaching institution? Salaries were, and even after the arbitration award are, the main issue. Pay was seen as the stick the Government had chosen to bring the universities to heel, and it united senior and junior academics in a common campaign. Action to withhold examination results had already started in Professor Diamond's department when the arbitration result was announced, but although he was adamantly opposed to militancy he is ignoring it. He thought the pay situation, especially for younger lecturers, was "absolutely scandalous". Professor D. H. Valentine, head of the botany department, in common with most Manchester professors, was against withholding examination results, but he clearly understood the weight of feeling behind the AUT decision.

There is wide-spread suspicion of the involvement of universities with government, although the UGC, and Sir Frederick Dainton in particular, are seen as reliable bulwarks. Professor Diamond, for eight years a UGC member, said: "I should hate to be on it now. It must be an extremely difficult job. It must be difficult for them to know where they are and whether they retain credibility in the universities."

But on criticisms that the UGC was becoming an arm of government, he noted that it was a sure sign the UGC was doing the right job if it was being criticized both by universities and by the Government.

Many at Manchester see the root of today's problems in the way the university system was expanded after Robbins. Mr George Smith, a deputy registrar, warned of the coming of a disgruntled middle-aged group of academics, appointed in the heyday of university expansion and of lower quality than the universities traditionally expected. They would be under pressure from bright young people appointed after expansion had effectively ceased but whose original motion would be blocked. Mr Smith was suspicious of Lord Crowther-Hunt's motives: if he is looking for comprehensive higher education systems, then he will ruin the universities. But he felt that the Privy Council, which he believed to be well disposed towards the universities, would protect them.

Academics are also angry that they are frequently important to counter charges that their research is irrelevant to national needs. A researcher in the chemistry department complained: "Unless we can quantify what we do each day in terms of the national good, then people can use what statistics they like and we have no argument against them."

Dr John Duffell, reader in chemistry, noted that research was an interest, not an imposition. "I could stop research, do such teaching as my head of department required, and still draw my full salary," he said. His views corresponded with those of Professor Worsley, who argued that the quality of this postgraduate work and research was the reason why Manchester was an attractive place to work and study. Without research, why should a student of academic

DAVID DICKSON looks at the future of space research under ESA

Europe still puts national interests first

Representatives of 10 European countries met in Paris two weeks ago to sign a convention giving formal approval to the setting up of a European Space Agency (ESA).

The new agency will, after almost 10 years of negotiation, bring the various aspects of inter-nationally-based space research under a single umbrella. In particular, it will combine the activities and responsibilities of the European Space Research Organization (ESRO), and the ill-fated European Launcher Development Organization (ELDO).

The significance of the agency's creation is more than administrative, however, for its research programme also reflects the major shift from pure to applied science which has taken place in space research over the past decade.

Today the research projects most likely to find support are those which openly promise a high economic or political return. Equally the conduct of the projects themselves—whose value can run into hundreds of millions of pounds—have been distributed between the countries involved in a common campaign. Action to withhold examination results had already started in Professor Diamond's department when the arbitration result was announced, but although he was adamantly opposed to militancy he is ignoring it. He thought the pay situation, especially for younger lecturers, was "absolutely scandalous". Professor D. H. Valentine, head of the botany department, in common with most Manchester professors, was against withholding examination results, but he clearly understood the weight of feeling behind the AUT decision.

Thus of the three major projects now being carried out under the ESA umbrella, Spacelab—involving the design and construction of a space laboratory which will be launched by NASA's "space shuttle" service—is receiving 54.1 per cent of its finance from Germany and the contract for its design and development has been awarded to the German aerospace group VFW-Fokker/ERNO.

Britain's main involvement is in the MAROTS maritime satellite programme. Our agreement to pay the major contribution to development costs reflects both the importance of international shipping to the country's economy, and the fact that the main contractors are Hawker Siddeley Dynamics Ltd and Marconi Space and Defence Systems Ltd.

Equally, the traditional French concern to avoid mortgaging Europe's future to the development of American technology has been a major factor behind the Ariane launcher project, for which France has agreed to pay over three quarters of the development costs, and which will make use of the Kourou launch site in French Guiana.

The changes involved in this shift in orientation from the early 1960s, when both ESRO and ELDO were established, have been far from painless.

In particular, ESRO's successful launching of a series of experimental satellites, reflecting an early move away from pure science into the field of applications, contrasted sharply with the failure of subsequent abandonment of ELDO's attempt to develop a multi-stage launcher based on the British Blue Streak missile.

While ELDO became racked with disagreement between its seven member countries over budget shares and administrative issues, ESRO was able to turn its attention to the potentially lucrative fields such as telecommunications satellites that space research was opening up.

ELDO's budget fell from a peak of about £60m in 1968 to little more than £10m in 1974, when its launcher programme was finally abandoned. At the same time the budget of ESRO increased from about £30m in 1970 to £102m in 1974, with the proportion of the budget spent on applications programmes increasing from about 5 per cent to 35 per cent over this period.

In the early stages of ESRO's history each of its member states made an overall contribution to the organization's budget, calculated in line with the country's gross national product. In 1971, however, it was agreed to introduce a new system of financing which would distinguish between compulsory activities within ESRO on basic and scientific programmes, and special programmes in which countries could participate on a voluntary basis.

This has now become the prime method of financing the project within the ESA, and the flexibility it has allowed member countries to participate or not in particular programmes has contributed significantly to its present healthy state.

For the *à la carte* choice, now offered to member countries, has allowed them to concentrate support on projects that are in line with national economic and political objectives.

Indeed, politics has never been far below the surface. On the one hand European cooperation in space research has been seen as providing a mechanism for the international coordination of technology policy. In its own guide *Europe in Space*, published last year, for example, ESRO stated that "space research has become an instrument for the construction of Europe".

Because space remains an immense virgin territory for exploration, requiring powerful and costly research facilities, it was a natural choice for the European countries to choose in 1973 to express clearly their renewed desire to undertake an ever closer cooperation, notwithstanding the tricky problems of the organization.

The other side of the political coin, however, has emerged a national rivalry within the administration, a problem largely responsible for the delay in the appointment of British-born Roy Gibson as ESA's first director general, and one which he is attempting to tackle by running the agency on strict management lines.

Mr Gibson confronted the task directly when he addressed the ministerial meeting of the European Space Conference in Brussels in April. "It is cardinal to the health of the agency that all concerned should be very, very clear, that once a person enters the agency he ceases to serve national interests," Mr Gibson said. "The agency must understand the needs and desires of the various member states, and staff with the national experience they bring with them can obviously help in this process, but they cannot and must not be considered as national ambassadors."

At the same meeting Mr Gibson outlined a number of important areas of activity for the agency in the immediate future, in addition to the management of programmes which had already been accepted to it.

He said that "contributing to the utilization of European space programmes and facilities was necessary to reduce duplication and waste, and the formulation of a 'coherent industrial policy' would require both time and sacrifice from member states. "The present application satellite programme and pre-operational programme will give place to operational systems, and it is already time to consider how these should be organized and what should be the role of the agency."

Finally, referring directly to the economic pay-off to be obtained from space research, Mr Gibson said that application satellites systems promised markets outside the agency's member states, and it was important to consider the extent to which the agency could assist European industry in winning such contracts.

The same concern for industrial and commercial interests in the projects themselves, for example, already being made, for example, of the first experimental programmes to be carried out in Spacelab on its first launch.

Among those which have been selected the majority have direct implications for industry, such as experimental studies of crystal growth, heat-treatments, and the production of metals, all studies within a variety environment.

The fact that pure science, so to have been left some way behind, provides one more reminder of the extent to which economic and political forces have permeated international scientific community.

THE TIMES HIGHER EDUCATION SUPPLEMENT 13.6.75

TIM ALBERT uncovers the scandal of unrecognized academic qualifications

Degrees without tears for the status seekers

On February 21 this year Timothy Sanusi, a Nigerian-born telephoneist living in South London, found himself in Bromley magistrates' court charged with using a forged BA certificate. He had been trying to get exemption from part of a business studies course. The worthless degree had been sold to him by William McDonald Duncan of International Status Symbols, Coventry, a man who, a few years ago, was reported in a national newspaper as saying that he considered the selling of his own degrees to be a bit of "harmless kidology". Mr Sanusi, who pleaded guilty, was fined £15 and ordered to pay £35 costs. No action has been taken against Mr Duncan.

The case highlights the extraordinary fact that anyone who tries to sell an unrecognized degree has so far stayed out of reach of the law. Various bodies in this country have been proposing legislation for more than 40 years, but so far nothing effective has been done. A senior adviser to the DES said that no considered the whole thing to be scandalous—but not scandalous enough for immediate political action.

Just how easy it is to sell unrecognized degrees is shown by correspondence in which Mr Duncan was asked whether he could provide a diploma or certificate to help the writer set up as an osteopath or chiropractor. Duncan offered a diploma "which describes you as a graduate of 'Nebraska College of Physical Medicine' qualified in Chiropractic and Osteopathy (five year course) entitled to affix the letters PhMD after your name. You may lawfully possess this diploma in this country, although of course you must not use it or permit it to be used for any unlawful purpose. Nevertheless I feel sure you will readily appreciate its real value". The cost was £12.50.

Mr Bill Dey, secretary to the University Entrance Requirements Department of London University, has been one of the leaders of the campaign against phoney degrees since the early 1950s. At that time he had to tell a Trinidadian who had sunk his life's savings into visiting England to do research that his correspondence college degree was unrecognized and worthless. The Commonwealth countries are still good markets for unrecognized degrees, as are the United States and Germany. Mr Dey says that three or four inquiries a week from prospective employers and professional bodies, compared with about one a month 10 years ago.

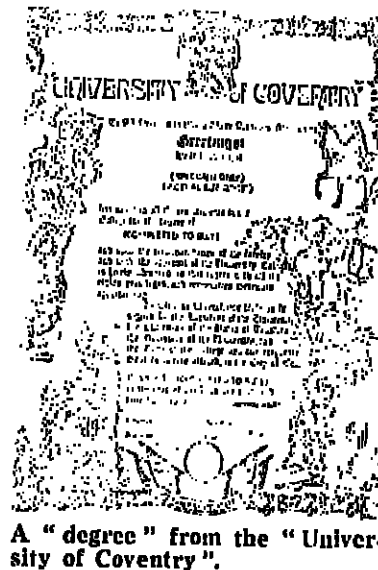
"The trouble is that many of these people honestly believe that they are buying something worthwhile," he says.

Mr Lyndon Jones, principal of the genuine South West London College, is another leading campaigner. "We can give chapter and verse on various people who have bought degrees, got jobs on the strength of them, then have lost their jobs when they were found out," he says.

People have been selling unrecognized degrees for more than 100 years. In 1880, for example, a crusading newspaper editor in Philadelphia bought a complete set of unrecognized qualifications for \$45. The practice flourished along with the increasing demand for qualifications, and by the 1950s there were an estimated 200 "degree mills" operating in the United States. Some had been granted licences from corrupt state administrations; others were awarded their degrees on the basis of lines of succession with various breakaway churches.

By 1960 the American Secretary of Health, Education and Welfare had published a black list of about 40 unrecognized degree institutions. Since then a number of states have additionally passed legislation which outlawed all but the approved degree-giving bodies. At present about two-thirds of the states have approved such legislation, and this has meant a boost for the British-based businesses.

In the United Kingdom the situation was relatively quiet until the end of the Second World War. In 1958 according to a British Council list there were at least five people awarding unrecognized degrees. These included Henry Chelieu, "Canon" Charles Bonwood, "Archbishop" Charles Brearley, "Sir" Sidney Lawrence (now "The Duke de Neuvilly or Nevilly") and "Dr" Bruce Copen. Mr Chelieu



A "degree" from the "University of Coventry".



Mr Bill Dey: "People believe they are buying something worthwhile."



Mr Lyndon Jones: "People lost their jobs when they were found out."

wood left the St Andrew's Eccumenical College, which he ran in Tottenham, to retire to St Leonard's-on-Sea.

Mr Bruce Copen a former RAF corporal, started his business in a caravan in a field near Great Missenden, and now has graduated to a country house in Sussex. He runs the "Sussex College of Technology", and the "University (or Academy) of the Science of Man", which both offer a wide range of degrees. The house also used to be the address for Brantridge Forest School, but its name recently appeared on a Council of Europe list of unrecognized degrees, and letters addressed to Brantridge do not seem to get an answer. Copen's syllabuses emphasize fringe medical subjects such as chirotherapy and radiology. Advertisements for the Academy of the Science of Man were appearing in the *Lagos Sunday Times* as recently as last April.

Sidney Lawrence, who is president of the "College of Applied Science, London", operates from a block of flats called College House which is a few miles from his comfortable North London home. When a *THES* investigator wrote to him from the United States for a brochure earlier this year, he added to the brochure a circular letter offering him an honorary degree, or—for \$30—membership of the unrecognized "British Institute of Advisory Consultants".

and certificates which have appeared over the years, Lawrence has had close links with Brearley. Until recently Brearley lived in a small terrace house in Sheffield, called himself the head of the Old Catholic Church of the North of England, wore clerical garb, and was both the Ministerial Training College and the "National Ecclesiastical University". But he is now in his 60s, and in the past year his former headquarters has been pulled down for slum clearance.

One famous incident which concerned both Brearley and Lawrence was mentioned by the German newspaper *Der Spiegel*. A German factory director, embarrassed by the fact that he was one of the few honorary senators of a university not to have a doctorate, asked Lawrence for a degree and a presentation. A girls' school in Kensington was hired and filled with suitably dressed "knights", "counts" and even an "abbot", all of whom clapped politely as the new German doctor was presented with a handsomely bound copy of his degree. It cost DM 30,000.

William Duncan, a former long-distance lorry driver, has moved out of the terrace house which was the headquarters of International Status Symbols, and letters are not being answered.

Also apparently moved on are the American academics Dr John Beare and Dr James Campbell. They operated LIAR (the "London Institute for Applied Research") from the Isle of Wight. For a while they sold their own honorary degrees through advertisements in a *Diners Club* magazine and admitted total sales of \$50,000 in 10 months. They also proposed to set up LIE—the London Institutes for Education.

It is worth remembering that—although some of the activities of these people seem harmless and entertaining—the use of unrecognized degrees and unrecognized qualifications can be dangerous. American newspapers have reported a number of cases of people who have used unrecognized degrees from this country. They included the head of a chain of child guidance clinics, and the director of a state health department, an air pollution control director (with an annual budget of \$1m). Then there was the New Jersey policeman who was formally reinstated after it was revealed that the psychological tester who had pronounced him unfit for duty himself had unrecognized British credentials.

Why is it allowed to happen? First, as the law stands at the moment there is nothing that can be done to stop the sale of worthless degrees in this country. According to the prospectuses, no charges of fraud can be laid against the sellers of unrecognized degrees.

Mr Copen sends out printed slips which warn: "We would like to point out that the awards offered in this curriculum are 'not recognized' by the educational authorities in the United Kingdom and therefore their use may be restricted to non-academic activities to which they may be put."

For obvious reasons those who have been duped have not been willing to say so in a court of law. The selling of degrees and diplomas has not been included in either the Trade Descriptions Act or the Fair Trading legislation.

The solution would be to introduce legislation, and this was first suggested in 1933. The Association of Scientific Workers then sponsored two bills, the University (Spurious Degrees Prevention of Use of Issue) Bill and the second version—the University Degrees Bill—was withdrawn after simple universities had made it clear that they considered that the legislation would discriminate against them.

In 1950 the Committee of Vice-Chancellors, backed by the British Council, proposed an Academic Degrees Bill which would have made a schedule of universities entitled to grant degrees. The DES managed to persuade them to postpone legislation until the findings of the Robbins commission.

The Robbins report duly advocated legislation: "We therefore wish to call attention to the anomalous state of the present law, under which, as is shown in Appendix Four, there is at present in Britain virtually nothing to restrain unauthorized associations or persons who purport to award degrees."

International Status Symbols

Valid by William M. Jones

255 Humber Avenue - Coventry - England - Tel. 0204 58417

Thank you for your enquiry.

Dear customer how you'd feel as a doctor? Or how a degree - in economics, or engineering perhaps - would further your career?

Degrees and doctorates are much easier to come by than you may have imagined - thanks to my Diploma #121.

My organization, for instance, is legally permitted to award degrees and doctorates on any subjects in the Academic Calendar.

I have been featured in leading newspapers both here and abroad, and have been interviewed on television (A.T.V.) in connection with my Diplomas.

A wide range of professional people seek my help with a view to obtaining University or College degrees. Listed in my files are: Mental Surgeons, Osteopaths, Midwife Agents, Engineers, A Bachelor of Laws, a Minister of Religion and many, many others too numerous to mention.

Every Diploma is painstakingly produced by highly-skilled artists and lithographers. All bear seals according to their ostensible origins.

When ordering, all that is required is that you pay a registration fee which is no more than £12.50, and is usually much less, depending on the degree or doctorate desired. I will then send you a most attractive Diploma, drawn on a sheet of sumptuous University and College stationery.

You, in turn, may legally make use of the relevant title and letters after your name. With a stylish Diploma to provide proof of your new qualifications.

Please let me know if you are interested by completing and returning the enclosed card. I will then inform you as to availability and price of your Diploma.

Cordially Yours,

P.S. It is not necessary to take any course or pass any exam. You receive your Degree Diploma within two weeks of ordering.

William M. Jones

can be conferred after studies of trivial content, or indeed after no study at all. It is true that such degrees have had limited appeal to residents in this island, but they have sometimes proved attractive to people abroad and have caused embarrassment to those concerned with the reputation of British education.

"Action is difficult, not only against those who confer worthless degrees, but also against those who falsely lay claim to genuine qualifications. We recommend legislation to remedy both deficiencies. In future the power to give degrees should be vested only in authorized bodies or persons and abuses would be capable of speedy and effective remedy."

Nothing happened until the Heath Administration, when a number of backbench MPs including Janet Footes, Joan Lester, Tom Cox, and Marcus Lipton, tried to press the Government to legislate on the sale of degrees only. It did not work, and the Government's response at the time revealed what was, and probably still is, the majority view of the DES officials.

This view pivots on the legal principle of caveat emptor (under which the onus is on the buyer to beware). The problem is seen as relatively small, and the difficulties of introducing, and thereby having to define, such concepts as "a degree" and "a university" are disproportionately large. Accordingly present measures such as circulating a "white list" of approved degree-giving bodies to British embassies, are believed to be sufficient.

Mr David Christie, lecturer in constitutional and administrative law at the University of Edinburgh, who has made a special study of uni-

versity law, disagrees. "You could quite easily pass an Act which would make it a criminal offence for anybody to award a degree which is not recognized by the state," he said. "That leaves you to define and recognize by the state" (1) what degrees are going to be covered.

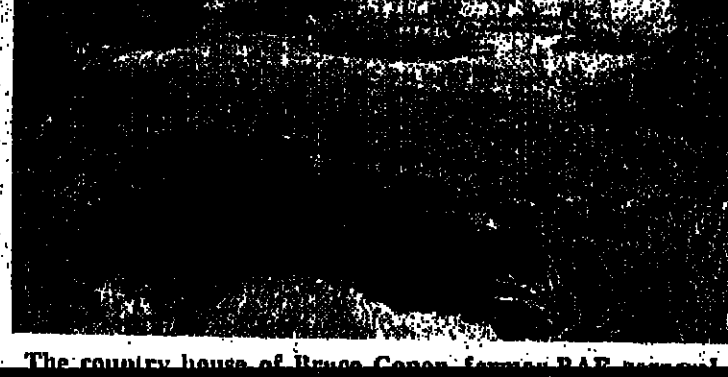
"As regards the first, most of this is already covered by the fact that most universities have royal charters, and special consideration can be given to the others (such as the four Scottish universities)."

"The second can be done simply by drawing up a list... It's not going to be 100 per cent watertight but that's not an argument for refusing to legislate."

It seems that this view has finally percolated through to the DES, and Mr Prentice has made it clear that he is determined to push through legislation. But that was several months ago. Professor Maurice Peston, the Minister's special adviser, says: "My hope was that we would legislate next year. I am still hoping. But the legislative timetable is very full and there must always be some doubt as to whether we can actually get it in."

Mr Christie says it can be done. "If the political will is there—it is—I'm having my doubts whether it is."

Looking back on the past record, that seems a fairly reasonable assessment. It looks as if the selling of unrecognized degrees is going to remain one of those scandals which are never quite serious enough—or never quite near enough to home—to be more than just about to be solved and never legislated out of existence.



The country house of Bruce Copen, former RAF corporal.

DAVID WALKER looks at the options for higher education in Scotland

A stronger touch of the tartan

Universities are the regarded children of the British institutions which the Government has thought suitable for devolution. Discussion of the question has been truncated. The Kilbrandon report evoked a caveat about the universities being a "special case", and the issue on the eve of an independent Scottish Assembly are still confused.

A day-long conference tomorrow in Edinburgh organized by the Times Educational Supplement (Scotland) on the whole question of devolution in education could put discussion of universities and regional government on a firmer basis.

By and large devolution has come to be a Scottish event with questions about the peculiar federalism of the University of Wales or the universities of Queen's, Belfast and Coleridge Kilbrandon and Crowther-Hunt will be joined by a representative of the Quebec Nationalist Party, so the discussion could take on an international flavour.

To the casual visitor the Scottish universities outside Stirling seem convincingly different from their English counterparts, already. Students' affairs are organized in a peculiar way with ancient officers like "rector", the power of ritual is greater, the office of principal is accorded more reverence; the four-year undergraduate degree and higher admissions rates for the leaving population all seem to give an impression of Scottish separatism.

Nevertheless a major criticism from the nationalist side is that Scottish universities have paid too much heed to the images of the English, and are losing those distinctive characteristics founded, it is said, in the traditional Scottish respect for education. The Scottish universities, particularly the ancient seats of learning at Glasgow, Edinburgh, Aberdeen and St Andrews make great play with their medieval origins that antedate all English universities outside Oxbridge.

A recent letter in the Scottish press from an academic put this attitude: "For five centuries until recently Scotland had strong links with famous universities such as Bologna, Paris, Coimbra, Berlin, Utrecht and Leyden, but these international connections are now being attenuated and stifled by English influences and practices."

Whether it is reaching back to historical precedents or carving out a new future for Scottish higher education, the Scottish case on the eve of the establishment of an assembly of some kind is interesting in it uses several crucial questions for the whole world of higher education: the relationship of universities and government; the "relevance" of universities for the community around them; the distinction of universities in the higher education system.

To the Scottish National Party, Scotland is not a case in some general scheme but a country with a unique balance of institutions into which the universities—the only element in the educational system ruled by a United Kingdom wide body—have to fit. At their conference in Perth last week, discussion of universities was limited, but by and large delegates accepted the idea of a grants committee in Edinburgh embracing the whole of post-school education.

The SNP position is by no means clear, as a discussion paper they published in March showed. Some commentators have seen a number of options open, depending on the competence given to the new Scottish Assembly:

● The status quo. The universities would continue to be financed through the United Kingdom University Grants Committee and so remain an anomaly in Scottish education. United Kingdom wide bodies in the validation of degree level work—the Council for National Academic Awards, the professional institutions—would continue to hold sway.

● The institutional status quo within nationalism. Many members of the SNP appeared to have conceived the granting of some measure of independence to Scotland as the transference to Edinburgh of governmental bodies at present in London. The Scottish universities would be financed through a smaller university grants body answerable to the Scottish Assembly. Validating bodies and the Open University would have Scottish counterparts.

● Institutional innovation. Lord Crowther-Hunt's presence at tomorrow's discussion is interesting for he is well known as a prophet of constitutional change and his recent "hints" at the need for trans-binary cooperation within higher education point towards some kind of higher education grants committee for Scotland. Such a body would presumably have the central institutions, colleges of education, and the universities. Close cooperation between central institutions and universities financed from London would be difficult, so a solution would be to have them under the same financial roof.

● A radical—but bureaucratic—option. The central institutions and colleges of education are at present under the auspices of the Scottish Education Department, one of the least accountable of British Government departments since parliamentary control is exercised through the Scottish Secretary whose brief is very wide. If the Scottish Assembly had powers over education, there is a strong case for the universities to fall in line with the present administrative arrangement for the rest of Scottish further and higher education and come under the Wing of the Scottish Education Department. If some of the SNP criticism of university "relevance" is heartfelt then it is likely to want quite close control of university work and the Scottish Education Department would be the most widely administrative machine for this.

If these are, roughly, the options it is worth seeing how far the protagonists have taken them. The SNP has paid little attention to institutional arrangements, concentrated on general aims. It wants fewer English students in Scottish universities, fewer English staff, more attention to Scottish history and culture in the syllabus, and admissions organized in Scotland by Scots.

The university establishment and the Association of University Teachers have argued effectively for keeping things as they are. The main grounds have been the need for an international perspective, the need for protection against government encroachment, on

research, and the almost indefinable university spirit which is anti-nationalist. Other protagonists include individuals like Dr Nigel Grant, and Mr Robert Bell, a lecturer at the (British) Open University and editor of Scottish Educational Studies. In that journal last year Mr Bell argued strongly for devolution as an opportunity for innovation in higher education.

The Scotsman newspaper has been a forum for opinion and a leader of opinion, generally in a nationalist direction, through writers like Mr Colin Bell.

Scottish students have taken a radical view. In a recent article in the Stirling University newspaper Campus, Mr John Reid, the honorary student association president, there, said the future lay in "an integrated system of post-school education in Scotland in which long-term planning can be taken by a higher education commission. It need not damage research standards, or the United Kingdom, or indeed international coordination of higher research which has become more and more necessary as the frontiers of knowledge advance."

While they might privately accept inevitability of change, formal statements from Scottish academics have generally been in favour of existing arrangements. Some universities, like Edinburgh, Glasgow and Aberdeen, have held discussions in senate that were on balance opposed to change. Scientists in particular have been concerned with the implications for research of devolution, a question inseparable in the eyes of the SNP from the future of the Scottish economy and the benefits to be received from offshore oil. Oil money, it is said, will finance sophisticated research and the expansion of Scottish higher education.

The positions taken up by members of the establishment are by no means clear cut. Take Mr J. Steven Watson, Principal of St Andrews, which is generally held to be one of the most "English" of Scottish universities. In January he delivered to the university court one of the most eloquent defences of the United Kingdom connexion in the UGC and the vice-chancellors' committee. He said: "If universities in Scotland are to pursue the ends of the independent service of learning and the application of international expertise to Scottish problems, our universities will have to avoid inspection and transfer self-satisfaction."

But at the same time Mr Steven Watson was one of the leaders of a movement among Scottish academics in the humanities to set up a Scottish academy of letters, convinced that the British Academy in London had not served Scottish interests well. If devolution of university work is to be a reality, the Scottish Education Department would be the most widely administrative machine for this.

If these are, roughly, the options it is worth seeing how far the protagonists have taken them. The SNP has paid little attention to institutional arrangements, concentrated on general aims. It wants fewer English students in Scottish universities, fewer English staff, more attention to Scottish history and culture in the syllabus, and admissions organized in Scotland by Scots.

The university establishment and the Association of University Teachers have argued effectively for keeping things as they are. The main grounds have been the need for an international perspective, the need for protection against government encroachment, on

research, and the almost indefinable university spirit which is anti-nationalist. Other protagonists include individuals like Dr Nigel Grant, and Mr Robert Bell, a lecturer at the (British) Open University and editor of Scottish Educational Studies. In that journal last year Mr Bell argued strongly for devolution as an opportunity for innovation in higher education.

The Scotsman newspaper has been a forum for opinion and a leader of opinion, generally in a nationalist direction, through writers like Mr Colin Bell.



Frankenstudent to the rescue

Years ago, when I was a mere spectator of the educational scene, I used to worry that the universities would not expand fast enough to meet the needs of the ever increasing number of students who would present themselves for higher education. Only later did I realize that in some areas the picture was quite different; it was the students who were not coming forward in sufficient numbers to meet the growing needs of the expanding universities and, more recently, the polytechnics. I am happy to say that this need no longer cause any anxiety.

Ordinary students are sometimes of a worrying aspect. After three or four years of intensive teaching, they are looking for more lecture fodder. One of Frankenstudent's advantages (and the more you have at him, the more great advantage he seems to have) is that he is a fiddling about the house of his context, once that are over, and in four years will be erased. A simple modification changes him from male to female; a further slight modification covers a Frankenstudent who has just completed a polytechnic course in ready to embark on a fresh course in physics and knitting.

Since it has been estimated by 1981, 140,000 of the 640,000 boys in higher education could be Frankenstudents, university of polytechnic authorities will be relieved to learn that they have been programmed not to be too closely disruptive.

This is not to say that Frankenstudent is a mere conformist, but out a will of his own will. What a demonic worth his said would establish values or never-ventured seminars with penitence enquiry? I understand that ideology of the extreme left has been found ideally suitable to feed into Frankenstudent's programme, for him to feel when appropriate, or for him to feel, when it is not.

The important thing is that Frankenstudent never goes too far. He is over-stimulated, but brick through a vice-chancellor window; but he would not be anything really wrong; he would return his books to the library.

through is made in one direction, in related areas students cease to be interchangeable. Take the problem of student halls of residence. Frankenstein can only bring relief here, for he does not need to sleep. He just switches off in a dark corner at times pre-selected in his main programme. And what about university libraries, raising their prices but still seem to make a loss? Frankenstudent only consumes what appears to be meat balls in an evilevoking, gray-typical of the fare usually available from the university caterers but, in fact, specially produced by his makers to sustain life.

Ordinary students are sometimes of a worrying aspect. After three or four years of intensive teaching, they are looking for more lecture fodder. One of Frankenstudent's advantages (and the more you have at him, the more great advantage he seems to have) is that he is a fiddling about the house of his context, once that are over, and in four years will be erased. A simple modification changes him from male to female; a further slight modification covers a Frankenstudent who has just completed a polytechnic course in ready to embark on a fresh course in physics and knitting.

Since it has been estimated by 1981, 140,000 of the 640,000 boys in higher education could be Frankenstudents, university of polytechnic authorities will be relieved to learn that they have been programmed not to be too closely disruptive.

This is not to say that Frankenstudent is a mere conformist, but out a will of his own will. What a demonic worth his said would establish values or never-ventured seminars with penitence enquiry? I understand that ideology of the extreme left has been found ideally suitable to feed into Frankenstudent's programme, for him to feel when appropriate, or for him to feel, when it is not.

The important thing is that Frankenstudent never goes too far. He is over-stimulated, but brick through a vice-chancellor window; but he would not be anything really wrong; he would return his books to the library.

Chairs

Professor M. R. Alderson, professor of medical information science, Southampton University, has been appointed to the Cancer Research Campaign chair of epidemiology, Institute of Cancer Research, Royal Cancer Hospital, University of London.

Dr H. Graham has been awarded the title of professor of German in respect of her post at King's College, University of London.

Dr E. J. Schleuter, reader in histopathology at the Royal Free Hospital School of Medicine, has been awarded the title of professor of clinical histopathology, in respect of his post at that school.

Professor William Cochran, professor of physics at the University of Edinburgh, has been appointed to the chair of natural philosophy at the university.

Appointments

Universities

London

Reader: P. R. G. Layard (economics of labour, London School of Economics).

Lecturer: R. W. Byrne (psychology).

Polytechnics

Oxford

Head of department: John Fuller (catering management).

General

Mr James Gordon Raitt, deputy director of education with West Sussex L.E.A., has been appointed joint secretary of the Schools Council from September 1.

Dr Hyman Rose, managing director of International Research and Development Co Ltd, and Dr P. J. Agius, director of research for Shell Petroleum Co Ltd, have been appointed members of the Advisory Council on Fuel and Power.

John Horsey, head of mathematics at Clifton College, has been appointed executive director of the School Mathematics Project.

Forthcoming events

A "Saturday of Cuban Poetry" arranged by the School of Languages of the Polytechnic of Central London will be held on June 21 from 11 am to 5 pm in the Fyvie Hall, PCL, 309 Regent Street, London, W1. Cuban poet Nicolas Guillen will read and discuss his poetry. Fee: £1.50, students 50p. Further information from Rosanna Focaccia, Short Course Unit, PCL, 35 Marylebone Road, London, NW1.

"The Language Element in European Studies" a three-day residential workshop/conference, organized by the Schools Information Unit of the Centre for Contemporary European Studies of the University of Sussex, will be held there from July 14-16. It is intended mainly for linguists working at secondary and tertiary levels who are defining the role of languages in integrated European studies courses.

Further information from Mrs Frances Lawrence, programme organizer, Centre for Contemporary European Studies, Sussex University.

"The Work of the Research Councils" is the theme of a one-day symposium, to be held on August 29 at part of this year's British Association meeting which opens at the University of Surrey on August 27. Professor S. Edwards, chairman of the Science Research Council, will review the councils' work. Enquiries to Mr P. Smith, Assistant Secretary, University of Surrey.

"Excellence or Equality: A Dilemma for Higher Education?" will be held at the University of Lancaster from September 1-5. Speakers will include Dr Clark Kerr, chairman of the Carnegie Council on Policy Studies in Higher Education, and Sir Roy Marshall, secretary-general of the Committee of Vice-Chancellors and Principals. Fee: resident, £80; non-resident, £30. Further information from D. J. Hounsell, secretary, International Conference on Higher Education, Lancaster University.

"Aspects of Energy Conversion" a residential summer school sponsored by the Science Research Council and

organized by the Energy Technology Support Unit at Harwell, will be held from July 14-19 at Lincoln College, Oxford. Designed primarily for post-graduate students in energy technology, it will concentrate on the processes involved in converting primary fuels into electrical energy. Fee: £150, including accommodation and meals. Further information from Dr I. M. Blair, Energy Technology Support Unit, Building 102 AERE Harwell, Didcot, Oxfordshire.

An international summer school in advanced information work is to be held in Sheffield from July 6-26 followed by a fourth and final week in London. Its aim is to introduce teachers, librarians and information scientists from developing countries to advanced methods and new techniques in areas of information retrieval, computer-aided research and management. For further information contact Professor W. L. Saunders, director of the Post-graduate School of Librarianship, University of Sheffield.

The sixteenth annual summer school in health physics (radiation protection) will be held in the department of Health, Safety and Environment, Imperial College, London, from June 23-July 4. The course is designed primarily for science graduates and will be of particular interest to those in central government, local authorities, higher education and industry whose duties involve radiation protection. Fee: £80 non-residential. Applications for admission to the course, Imperial College, London SW7 2AZ.

University of Manchester Institute of Science and Technology. Sir Roger Bannister, consultant physician to the National Hospital for Nervous Diseases and chairman of the UMIST and a member of the staff for 51 years.

Mr W. D. Oldham, chairman of the Manchester Technology Association, Dr R. B. Stannard, former chairman of the Intermediate Technology Development Group and director of the Scott-Bader Organisation.

NOTICE BOARD

Honorary degrees

Bath

DSc: Sir William Emrys Jones, director general of the Agricultural Development and Advisory Service; Professor Kenneth Machler, emeritus professor of genetics, Birmingham University and former vice-chancellor of Southampton University; Sir William Cook, former chief scientific adviser, Ministry of Defence; Sir Stanley Hooker, group technical director of Rolls-Royce.

MA: Ms Amy D. Cadwallader, former head of Bath Diocesan School for Girls; Colonel Seymour Williams, former chairman of Gloucestershire County Council Further Education Committee and their representative on the Council of the University of Bath; Mr Cuthbert Bates, director of the City of Bath Bach Choir.

DLitt: The Right Rev Edward Barry Henderson, Bishop of Bath and Wells, Kent.

The Most Rev Dr F. D. Coggan, Archbishop of Canterbury.

DSc: Professor M. V. Wilkes, professor of computer technology and head of the computer laboratory, Cambridge University.

DLitt: Professor W. T. Baxter, formerly professor of accounting, LSE; Mr William Golding, author; Mr L. G. Illingworth, political cartoonist.

Leeds

L.D.: Professor Sir Rupert Cross, Vinerian professor of law, University of Oxford; Lord Pannell, formerly MP for West Leeds; Mr David Woodhouse, former director of the Yorkshire Company of Clothworkers; Mr Ralph C.

College, Cambridge (history of science); Christopher R. Smith, broke College, Cambridge (English); Jeremy R. Stone, University College, Oxford (philosophy).

Massachusetts Institute of Technology; James Caven-Atack, Loughborough University of Technology (civil engineering); Lindsay L. K. Harkness, Lady Margaret Hall, Oxford (biology); Christopher J. Hooley, Hertford College, Oxford (chemical engineering).

Nottingham

L.D.: Mr John Anstey, formerly chairman and managing director of John Player and Sons and a member of the university council; Mr D. L. Evans, chairman of the Nottinghamshire Area Health Authority (Teaching); a member of the university council; Dr Halidan Mahler, director-general of the World Health Organisation.

DSc: Mr J. Canerog-Gifford, vice-president of the university council and president of the university; Mr C. Humphrey Cripps, life member of the university council; Emeritus Professor E. J. W. Barrington, formerly professor of zoology at the university; Dr D. L. Evans, Emeritus Professor Sir Derrick Dunlop, former chairman of the Medical Council.

LLM: Mr Alfred Plumb, registrar.

Scholarships

The Kennedy scholarships for the year 1973-74 have been awarded to the following:

Harvard University: Michael G. Bier, Trinity College, Cambridge (Urban Planning); John A. Caldwell, Queen's University of Belfast (law); Elizabeth M. Fricker, St Anne's College, Oxford (economics); Stephen A. J. Locke, St Catharine's College, Cambridge (biology); Rosemary S. Pridmore, Newnham College, Cambridge (general education); Simon J. Schaffer, Trinity

College, Cambridge (history of science); Christopher R. Smith, broke College, Cambridge (English); Jeremy R. Stone, University College, Oxford (philosophy).

Massachusetts Institute of Technology; James Caven-Atack, Loughborough University of Technology (civil engineering); Lindsay L. K. Harkness, Lady Margaret Hall, Oxford (biology); Christopher J. Hooley, Hertford College, Oxford (chemical engineering).

Nottingham

L.D.: Mr John Anstey, formerly chairman and managing director of John Player and Sons and a member of the university council; Mr D. L. Evans, chairman of the Nottinghamshire Area Health Authority (Teaching); a member of the university council; Dr Halidan Mahler, director-general of the World Health Organisation.

DSc: Mr J. Canerog-Gifford, vice-president of the university council and president of the university; Mr C. Humphrey Cripps, life member of the university council; Emeritus Professor E. J. W. Barrington, formerly professor of zoology at the university; Dr D. L. Evans, Emeritus Professor Sir Derrick Dunlop, former chairman of the Medical Council.

LLM: Mr Alfred Plumb, registrar.

Scholarships

The Kennedy scholarships for the year 1973-74 have been awarded to the following:

Harvard University: Michael G. Bier, Trinity College, Cambridge (Urban Planning); John A. Caldwell, Queen's University of Belfast (law); Elizabeth M. Fricker, St Anne's College, Oxford (economics); Stephen A. J. Locke, St Catharine's College, Cambridge (biology); Rosemary S. Pridmore, Newnham College, Cambridge (general education); Simon J. Schaffer, Trinity

College, Cambridge (history of science); Christopher R. Smith, broke College, Cambridge (English); Jeremy R. Stone, University College, Oxford (philosophy).

Massachusetts Institute of Technology; James Caven-Atack, Loughborough University of Technology (civil engineering); Lindsay L. K. Harkness, Lady Margaret Hall, Oxford (biology); Christopher J. Hooley, Hertford College, Oxford (chemical engineering).

Nottingham

L.D.: Mr John Anstey, formerly chairman and managing director of John Player and Sons and a member of the university council; Mr D. L. Evans, chairman of the Nottinghamshire Area Health Authority (Teaching); a member of the university council; Dr Halidan Mahler, director-general of the World Health Organisation.

DSc: Mr J. Canerog-Gifford, vice-president of the university council and president of the university; Mr C. Humphrey Cripps, life member of the university council; Emeritus Professor E. J. W. Barrington, formerly professor of zoology at the university; Dr D. L. Evans, Emeritus Professor Sir Derrick Dunlop, former chairman of the Medical Council.

LLM: Mr Alfred Plumb, registrar.

Yablon, a graduate of the university. DLitt: Captain Stephen Wentworth Roskill, fellow of Churchill College, Cambridge; Lord Trevelyan, chairman of the British Museum Trustees.

DSc: Dr A. Rosemary Murray, vice-chancellor elect, Cambridge University; DMS: Mr Donald Hunt, former president and member of the choristers at Leeds parish church.

MSC: Mr R. K. Fourness, former managing director of Yorkshire Chemicals.

London

DSc: Sir Christopher Cockerell; The Rt Hon Lady Wootton (economics); L.D.: Sir Douglas Logan; The Rt Hon Lord Shepherd.

DLitt: Professor A. Momigliano; DMS: Sir Michael Tippett.

Nottingham

L.D.: Mr John Anstey, formerly chairman and managing director of John Player and Sons and a member of the university council; Mr D. L. Evans, chairman of the Nottinghamshire Area Health Authority (Teaching); a member of the university council; Dr Halidan Mahler, director-general of the World Health Organisation.

DSc: Mr J. Canerog-Gifford, vice-president of the university council and president of the university; Mr C. Humphrey Cripps, life member of the university council; Emeritus Professor E. J. W. Barrington, formerly professor of zoology at the university; Dr D. L. Evans, Emeritus Professor Sir Derrick Dunlop, former chairman of the Medical Council.

LLM: Mr Alfred Plumb, registrar.

Scholarships

The Kennedy scholarships for the year 1973-74 have been awarded to the following:

Harvard University: Michael G. Bier, Trinity College, Cambridge (Urban Planning); John A. Caldwell, Queen's University of Belfast (law); Elizabeth M. Fricker, St Anne's College, Oxford (economics); Stephen A. J. Locke, St Catharine's College, Cambridge (biology); Rosemary S. Pridmore, Newnham College, Cambridge (general education); Simon J. Schaffer, Trinity

College, Cambridge (history of science); Christopher R. Smith, broke College, Cambridge (English); Jeremy R. Stone, University College, Oxford (philosophy).

Massachusetts Institute of Technology; James Caven-Atack, Loughborough University of Technology (civil engineering); Lindsay L. K. Harkness, Lady Margaret Hall, Oxford (biology); Christopher J. Hooley, Hertford College, Oxford (chemical engineering).

Nottingham

L.D.: Mr John Anstey, formerly chairman and managing director of John Player and Sons and a member of the university council; Mr D. L. Evans, chairman of the Nottinghamshire Area Health Authority (Teaching); a member of the university council; Dr Halidan Mahler, director-general of the World Health Organisation.

DSc: Mr J. Canerog-Gifford, vice-president of the university council and president of the university; Mr C. Humphrey Cripps, life member of the university council; Emeritus Professor E. J. W. Barrington, formerly professor of zoology at the university; Dr D. L. Evans, Emeritus Professor Sir Derrick Dunlop, former chairman of the Medical Council.

LLM: Mr Alfred Plumb, registrar.

Scholarships

The Kennedy scholarships for the year 1973-74 have been awarded to the following:

Harvard University: Michael G. Bier, Trinity College, Cambridge (Urban Planning); John A. Caldwell, Queen's University of Belfast (law); Elizabeth M. Fricker, St Anne's College, Oxford (economics); Stephen A. J. Locke, St Catharine's College, Cambridge (biology); Rosemary S. Pridmore, Newnham College, Cambridge (general education); Simon J. Schaffer, Trinity

College, Cambridge (history of science); Christopher R. Smith, broke College, Cambridge (English); Jeremy R. Stone, University College, Oxford (philosophy).

Massachusetts Institute of Technology; James Caven-Atack, Loughborough University of Technology (civil engineering); Lindsay L. K. Harkness, Lady Margaret Hall, Oxford (biology); Christopher J. Hooley, Hertford College, Oxford (chemical engineering).

Nottingham

L.D.: Mr John Anstey, formerly chairman and managing director of John Player and Sons and a member of the university council; Mr D. L. Evans, chairman of the Nottinghamshire Area Health Authority (Teaching); a member of the university council; Dr Halidan Mahler, director-general of the World Health Organisation.

DSc: Mr J. Canerog-Gifford, vice-president of the university council and president of the university; Mr C. Humphrey Cripps, life member of the university council; Emeritus Professor E. J. W. Barrington, formerly professor of zoology at the university; Dr D. L. Evans, Emeritus Professor Sir Derrick Dunlop, former chairman of the Medical Council.

LLM: Mr Alfred Plumb, registrar.

Scholarships

The Kennedy scholarships for the year 1973-74 have been awarded to the following:

Harvard University: Michael G. Bier, Trinity College, Cambridge (Urban Planning); John A. Caldwell, Queen's University of Belfast (law); Elizabeth M. Fricker, St Anne's College, Oxford (economics); Stephen A. J. Locke, St Catharine's College, Cambridge (biology); Rosemary S. Pridmore, Newnham College, Cambridge (general education); Simon J. Schaffer, Trinity

College, Cambridge (history of science); Christopher R. Smith, broke College, Cambridge (English); Jeremy R. Stone, University College, Oxford (philosophy).

Massachusetts Institute of Technology; James Caven-Atack, Loughborough University of Technology (civil engineering); Lindsay L. K. Harkness, Lady Margaret Hall, Oxford (biology); Christopher J. Hooley, Hertford College, Oxford (chemical engineering).

Nottingham

L.D.: Mr John Anstey, formerly chairman and managing director of John Player and Sons and a member of the university council; Mr D. L. Evans, chairman of the Nottinghamshire Area Health Authority (Teaching); a member of the university council; Dr Halidan Mahler, director-general of the World Health Organisation.

DSc: Mr J. Canerog-Gifford, vice-president of the university council and president of the university; Mr C. Humphrey Cripps, life member of the university council; Emeritus Professor E. J. W. Barrington, formerly professor of zoology at the university; Dr D. L. Evans, Emeritus Professor Sir Derrick Dunlop, former chairman of the Medical Council.

LLM: Mr Alfred Plumb, registrar.

Universities cash in on Iranian connexion

NEW YORK
Iran and other oil-rich countries of the Middle East are beginning to bestow substantial grants on American educational institutions with prestigious technological facilities in return for cooperative—and sometimes irregular—arrangements.

The grants, which range from \$100,000 to several million dollars, are given for a variety of ventures, including "feasibility studies," special chairs, faculty-exchange programmes, special programmes for Middle Eastern students in this country, and—in Iran—the planning of vast complexes to which well-known American institutions will lend their names.

Large American universities, facing unpleasant economic prospects, are sending their most effective fund-raisers to Middle Eastern capitals for lengthy stays and "exploratory conversations" with high officials, many of whom hold American degrees.

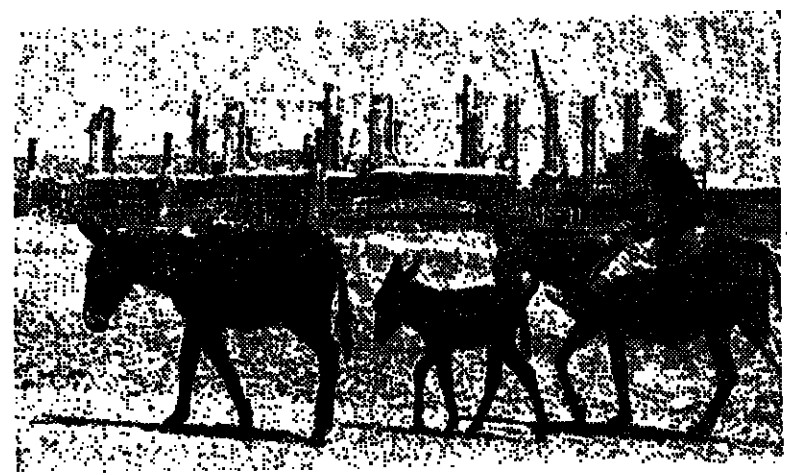
Likewise, Middle Eastern officials, anxious to increase as quickly as possible the technological capabilities of their countries, are making the rounds of Ivy League and other renowned institutions. It is difficult to ascertain how wide an influence petrodollars are having on the American educational establishment. Some institutions, feeling advanced political respect, make no announcements of these new grants. Others refuse to name the amount of the grant or discuss the details of the programme for which it is given.

One indicator, however, is the dramatic increase in American campus visits of students from the Middle East.

According to the estimates of the American Friends of the Middle East, the total Arab student population here went from 8,800 in 1974 to 12,000 in 1975—an increase of 36 per cent in one year.

In the same period, the number of Iranian students went from 1,550 to 13,500. Many of these students are here because of special arrangements between their governments and the institution they attend. Iran, which sends more students than all the Arab countries combined, is also by far the greatest Middle Eastern benefactor of American education.

Georgetown University in Washington, DC, for example, has been awarded \$1.1m for a five-year cooperative arrangement with Fer-



Iran: ancient and modern.

dowsi University in Iran. Georgetown's responsibilities have yet to be spelled out in detail but will include mutual exchange of students and faculty, the education and re-training of Ferdowsi faculty members, technical and scientific assistance toward the creation of a post-doctoral science programme at Ferdowsi, and the persuading of qualified Iranians now in the United States to return to Iran to teach.

Georgetown, noted for its linguistics department, offered to design a literacy programme for Iran, where only three people in 10 can read, but Ferdowsi was not interested. Like many of the Iranian-American programmes, the Ferdowsi-Georgetown arrangement is open to the frequently heard criticism that such programmes are intended to provide opportunities for Iran's upper class, while leaving the peasantry untouched and without attempting to create the broad middle class essential to technological society.

A special project of the Shah of Iran is the establishment of a new university, to be named after the Shah's father and built near his birthplace on the shore of the Caspian Sea. Reza Shah Kabir University is to be a small, post-graduate institution. English will be the official language, and at least half the university will be devoted to the pure sciences.

Harvard University has been given \$400,000 to do a preliminary study on the possibilities for such an institution. There are no specific guidelines for the study, but according to Richard Leshy, assistant dean of arts and sciences, the \$400,000 is only for "cost reimbursement" for travel and similar expenses, and Harvard must "return anything unspent".

The government of Iran has established new chairs in the engineering departments of several major American universities. For instance, \$1m was given last August to the University of Southern California for a professorship in "petroleum engineering".

USC is seeking more Iranian

grants. Another grant of \$1m has been given to George Washington University to establish a chair of "multi-national management". The arrangements between George Washington University and Iran are mysterious. In addition to the chair, GWU concluded two agreements with Iran last June, one involving the creation of a "post-graduate university," the other with the "Iranian military".

The programme for the military is to be called the Special Programme in Computer Sciences for Iranian Students. Its director, David Gillard, said he was newly appointed and could therefore not provide details. According to James Thayer, assistant dean of the School of Engineering and Applied Sciences, the programme will take each student up to three years to complete and will include computer science, English and Computer science at the master's level.

Students are not selected by GWU but presented by the Iranian military with GWU retaining the right to veto an individual student as below GWU's standards. Students are chosen by the military on the basis of their academic qualifications and their "security clearance". They will be housed in accordance with the specifications of the Iranian military, not with other GWU students but in special "private" quarters. Forty-three students have already arrived, and about 10 more are expected.

Harold Liebowitz, dean of the School of Engineering and Applied Sciences, refused to release any more information about the programme, saying that its cost and nature are "between us and the Iranians". The most controversial programme thus far is at the Massachusetts Institute of Technology. The Iranian government is giving MIT \$1.4m to train 54 graduate students, to be "nominated" by Iran, in nuclear engineering over the next two years. MIT students Iranian demonstrations recently, and held a referendum in which they voted 1,001 to 214 against the programme.

Old boy schools boost budgets

CAMBRIDGE, MASS.
The current popularity of continuing education courses, plus the growing financial plight of many universities have combined to create a new—and currently booming—branch of higher education: the summer alumni college. These week-long sessions give alumni the opportunity to relive their halcyon college days, to combine a vacation with relatively untaxing courses, to renew their intellectual—and hopefully financial—ties to their alma mater.

The Washington-based Council for Advancement and Support of Education says that it has been besieged by requests for information on setting up alumni programmes this year, and a record number will be held this summer.

But the phenomenon is not new. Dartmouth College pioneered the alumni college in 1964, because, according to its former president, Mr John Sloan Dickey, "We felt at the time that alumni should have an opportunity for serious liberal study. Their relationship to Dartmouth shouldn't be restricted to financial support or enthusiasm at football games."

Since the programme began, the

United States, and this summer private colleges such as Cornell, Stanford, Princeton, Harvard and Brown will hold several week-long sessions. Many public colleges have also begun such programmes, including the University of Indiana at Bloomington, Berkeley and the University of Michigan.

A typical alumni college session features lectures by top faculty members, on-campus tours, and smaller discussion sessions. Dartmouth's programme this year is entitled "The Twentieth Century". Pomona College in California will discuss "Whatever Happened to the American Dream?" while Harvard will offer a more traditional course—Soviet politics—in the twentieth century.

There are no tests or papers—indeed the requirements are minimal, since there is no evaluation process. There is a daily cocktail hour and various forms of entertainment in the evenings.

Students live in dormitories and eat cafeteria food; these study vacations are ideal for recession-conscious holiday-makers. Dartmouth charges \$345 for its 12-day alumni college, and Michigan \$105 for its week-long course. The low pressure, and comparatively low price contrast with more traditional summer refresher courses at business or medical schools, which are more demanding.

'Low fees an impossibility'

A policy of low tuition fees for students in the first two years of college would be almost impossible to implement, according to a report from the Carnegie Council on Policy Studies in Higher Education. The policy was proposed by the Zook Committee in 1947 and has been supported by the Carnegie Commission on several occasions. It has recently received renewed interest in Congress and among educationists.

It is "improbable" that a national pattern of low or no tuition fees in the first two years of college could be achieved through state action, the report says, "in view of the trend toward rising tuition in public colleges and universities in many of the states" and the growing emphasis on "scholarship programmes as a means of alleviating the effects of the rising tuition level between public and private universities".

Low or No Tuition. An analytical report of the Carnegie Council on Policy Studies in Higher Education. Jossey-Bass Publishers. \$5.95.

Graduate job openings fall still farther

from Frances Hill

NEW YORK
Employers estimate that they will take on 18 per cent fewer college graduates this year than last year, according to a report from the College Placement Council. In November employers were indicating that there might be a 4 per cent drop in the new employment of college graduates.

The decrease is the first general overall decline in the hiring of graduates since 1970-71, when there was a 27 per cent fall.

Last autumn it was expected that the downward trend in recruiting would be tempered by the demand for engineers and the strong position of the petroleum industry, the report says. But neither of these expectations has materialized. At all degree levels openings for engineers dropped 20 per cent, while the petroleum industry showed only a 4 per cent increase over last year in graduate employment, in contrast to the 33 per cent increase anticipated last autumn. The engineering decrease followed three successive years of increases: 7 per cent in 1971-72, 32 per cent in 1972-73 and 14 per cent in 1973-74.

By degree level the largest drop is likely to be experienced at the doctoral level—20 per cent. The decline at bachelor's level is estimated at 18 per cent and at master's level at 17 per cent.

No categories of employment have escaped the decline. The least affected graduate areas are the sciences, mathematics and technical subjects at the bachelor's level, which are down 7 per cent, and engineering at the doctoral level, which is down 10 per cent. Business administration at the master's level is down 11 per cent. Business at the bachelor's level has dropped 28 per cent.

Recruitment in the humanities and social sciences dropped 9 per cent. But prospects for graduates in these fields are not better than for those in the sciences and engineering, as this year's drop follows a decline of 45 per cent in 1970-71 and no improvement in the intervening years.

Of recruitment in the humanities and social sciences 36 per cent was by the federal government, which draws on a pool including recent as well as new graduates.

The only types of employers which showed an increase in the recruitment of graduates, besides the petroleum industry, were local and state government agencies—up 11 per cent—and non-profit and educational institutions (for non-teaching positions)—up 7 per cent. But the amount of hiring in both these categories is low.

Normally "stable" employers such as public accounting firms, the metals, chemical and drugs industries, all of which had anticipated increased hiring this year, were part of the downward trend. Public accounting dropped only 5 per cent, but chemicals/drugs and metals declined 21 per cent and 24 per cent respectively. The largest increases are estimated for the building materials and construction industry and for automotive and mechanical equipment firms, both down 60 per cent.

Employers do not expect appreciable improvement in hiring until at least next spring, the report says. Many employers said that there is little necessity to do much recruiting of new graduates because of an available supply of experienced individuals and recent graduates coupled with reduced turnover and internal re-allocation of personnel.

Washington underspending hits 100,000 poor students

from Angela Stent

CAMBRIDGE, MASS.
As the current academic year draws to a close, it has been announced that the federal government has left unspent one-quarter of the \$535m scholarship money it gives to poor students who want to attend college. At least 100,000 more students could have had financial aid this year if the money had been properly administered.

Congressional critics monitoring the Basic Education Opportunity Grant programme contend that bureaucratic ineptness has resulted in a second year of millions of unspent dollars.

During this past academic year, which was the first time that this scholarship money had been made available under Title IV of the Higher Education Act, only \$60m was spent for 600,000 students, instead of the \$122m appropriated to the fund.

The Basic Education Opportunity Grant programme provides students from families with an income of under \$12,000 a year with scholarships of up to \$1,000. The size of the scholarship is dependent on family income and may exceed one-half of the student's cost. The minimum level of the grant is \$50.

One administrator of the fund said that the formula under which the money is spent is so complicated that it has proved impossible to tell how many students are applying, how much money each will be entitled to, and how many of those qualified will actually accept it. He added that 15 per cent of the students who said in applications and are approved never collect their money. But because of the way in which the formula for aid is now set up, the applicants do not collect keep other students from receiving the full amount authorized by Congress.

Concern rises over cheating

from Angela Stent

CAMBRIDGE, MASS.
It was perhaps a sign of these pressured academic times that last month a conference on cheating and college honour codes was held at the University of Charlottesville in Virginia. American college honour codes assume mutual trust among the students involved, and expect them to honour their word to refrain from cheating, lying or stealing and to report their fellow students if they violate the code.

The breakdown of the honour code has reached alarming proportions, and various scandals have come to light, which show how far some students are willing to delve into the criminal underworld to achieve good grades. For instance, a ring of enterprising students has begun to copy transcripts of the scholars' records of good students and is selling them to lesser students who then substitute their names and submit them to graduate schools.

As a result, the Law School Admissions Council now requires that

students who take the law board be fingerprinted, so that officials can detect impostors who take the test for others.

The worst single cheating case this year occurred at the University of Florida in Gainesville. About 200 students were involved in the theft, sale and exchange of dozens of exams in the university's School of Business Administration.

An honour court has been investigating the scandal since January and its findings are sobering. A handful of students began the cheating and sold the tests at prices up to \$200 a piece. Soon, so many students had obtained copies that others, who did not want to cheat, were forced to.

As students continue to rifle professors' files and go to any lengths to get grades which will assure them places in professional and graduate schools, the honest and diligent students are being outmanoeuvred. At the Virginia conference, one large representative described a plagiarism seminar, which required students the emptiness of cheating.

Brazil

Standards tumble as numbers keep rising

from Patrick Knight

RIO DE JANEIRO
The massive growth in secondary schooling during the past few years has forced a rapid expansion of higher education, but in a rather curious way. In 1964 there were 134,000 undergraduates, now there are more than a million, and the extra numbers have been overwhelmingly absorbed by a recently created private sector, where 80 per cent of students now study.

Nobody knows exactly how many private faculties now exist, but 600 is a recent estimate. Most offer a limited number of courses, generally in philosophy, law or the arts. They vary enormously in standard, but the majority are run purely as profit-making businesses. The only state government agencies—up 11 per cent—and non-profit and educational institutions (for non-teaching positions)—up 7 per cent. But the amount of hiring in both these categories is low.

Normally "stable" employers such as public accounting firms, the metals, chemical and drugs industries, all of which had anticipated increased hiring this year, were part of the downward trend. Public accounting dropped only 5 per cent, but chemicals/drugs and metals declined 21 per cent and 24 per cent respectively. The largest increases are estimated for the building materials and construction industry and for automotive and mechanical equipment firms, both down 60 per cent.

Employers do not expect appreciable improvement in hiring until at least next spring, the report says. Many employers said that there is little necessity to do much recruiting of new graduates because of an available supply of experienced individuals and recent graduates coupled with reduced turnover and internal re-allocation of personnel.

Recruitment in the humanities and social sciences dropped 9 per cent. But prospects for graduates in these fields are not better than for those in the sciences and engineering, as this year's drop follows a decline of 45 per cent in 1970-71 and no improvement in the intervening years.

Of recruitment in the humanities and social sciences 36 per cent was by the federal government, which draws on a pool including recent as well as new graduates.

The only types of employers which showed an increase in the recruitment of graduates, besides the petroleum industry, were local and state government agencies—up 11 per cent—and non-profit and educational institutions (for non-teaching positions)—up 7 per cent. But the amount of hiring in both these categories is low.

Normally "stable" employers such as public accounting firms, the metals, chemical and drugs industries, all of which had anticipated increased hiring this year, were part of the downward trend. Public accounting dropped only 5 per cent, but chemicals/drugs and metals declined 21 per cent and 24 per cent respectively. The largest increases are estimated for the building materials and construction industry and for automotive and mechanical equipment firms, both down 60 per cent.

Employers do not expect appreciable improvement in hiring until at least next spring, the report says. Many employers said that there is little necessity to do much recruiting of new graduates because of an available supply of experienced individuals and recent graduates coupled with reduced turnover and internal re-allocation of personnel.

Recruitment in the humanities and social sciences dropped 9 per cent. But prospects for graduates in these fields are not better than for those in the sciences and engineering, as this year's drop follows a decline of 45 per cent in 1970-71 and no improvement in the intervening years.

Of recruitment in the humanities and social sciences 36 per cent was by the federal government, which draws on a pool including recent as well as new graduates.

The only types of employers which showed an increase in the recruitment of graduates, besides the petroleum industry, were local and state government agencies—up 11 per cent—and non-profit and educational institutions (for non-teaching positions)—up 7 per cent. But the amount of hiring in both these categories is low.

Normally "stable" employers such as public accounting firms, the metals, chemical and drugs industries, all of which had anticipated increased hiring this year, were part of the downward trend. Public accounting dropped only 5 per cent, but chemicals/drugs and metals declined 21 per cent and 24 per cent respectively. The largest increases are estimated for the building materials and construction industry and for automotive and mechanical equipment firms, both down 60 per cent.

Employers do not expect appreciable improvement in hiring until at least next spring, the report says. Many employers said that there is little necessity to do much recruiting of new graduates because of an available supply of experienced individuals and recent graduates coupled with reduced turnover and internal re-allocation of personnel.

It has proved relatively easy to change people's status values in Brazil. There are 2,500 applicants for this year's 300 places at the Sao Paulo faculty of physics, for example.

This trend has not yet extended to the acceptance that to be a good middle level technician is as important as to be a professional scientist, probably because the gulf in salary between them is still so great. As soon as the average student becomes qualified as a technician, he invariably tries to enrol for a university course.

In view of existing standards, emphasis has frequently been on encouraging the better graduates to continue to follow taught post-graduate courses, usually taking two years. There are now some 645 post-graduate courses offered throughout Brazil, almost 200 in Sao Paulo alone. Demand is also growing for people with doctorates and masters' degrees, in particular at the universities and the various research institutes run by the ministries.

There are certain areas, notably tropical medicine, agriculture and the technology of certain minerals unique to Brazil, where special emphasis will be given. Brazil sees herself as the first major tropical civilization to develop, with all the responsibilities and challenges that this involves. With plans to substantially increase agricultural production, a fundamental of the 1975-79 National Development Plan, stress will also be put on agronomy and on research into crop and stock improvement. As Amazonia is opened up, and populations move into the area, problems of tropical medicine will become more acute. At the moment only eight of Brazil's 100 million live in Amazonia, which covers nearly 60 per cent of the country.

Of major importance are the efforts being made in industrial training by the National Service for Apprenticeship Training, SENAI. Financed by a 1 per cent payroll levy for medium and large scale enterprises, SENAI has expanded its scope in recent years, having moved in particular to adult education, where short courses are available; 103,000 students took courses in 1973, as many as in the first 25 years of SENAI's existence, from 1942 until 1967. In the early years, however, the great majority were three to four year full-time or sandwich courses, so perhaps the comparison is unfair.

SENAI enjoys a very close relationship with industry, whose representatives are consulted during planning for new courses and machinery. SENAI's income is 80 per cent of funds are returned directly to the state of origin, the remainder is distributed to the more backward areas of the country, such as the north east. This is one of the ways by which Sao Paulo and the south can pay back their debt to parts of the country from which so much of their human and material resources come.

Canada

Union calls for jobs to be offered to Canadians first

from Israel Cinman

OTTAWA
The governing council of the Canadian Association of University Teachers has approved a series of guidelines designed to encourage the hiring of Canadians over non-Canadian universities.

The guidelines urge that faculty appointments should be offered to best qualified Canadian applicants unless there are strong corroborated reasons to believe that a non-Canadian has superior academic credentials.

They call for the creation of university-wide committees to review appointments with a mandate of ensuring that "an active effort is made to recruit Canadians".

These committees would be charged with investigating whether a department's decision to offer a position to a non-Canadian was justified. If a non-Canadian is to be appointed, the department wishing to make the appointment will be required to produce documented proof why a non-Canadian is being considered for the post.

But if a non-Canadian is appointed, he would automatically be given all rights and privileges

accorded to CAUT members, and his nationality ought not affect, in any way, the terms and conditions of his employment, including academic freedom, salary, promotion and tenure.

The term "Canadian" as it appears in the guidelines was purposely left undefined. According to Professor David Braybrooke, CAUT incoming president and chairman of the CAUT Committee on Canadianization and the University, the vague wording is required because of human rights legislation in four provinces that prohibits discrimination against landed immigrants in hiring.

The latest Statistics Canada figures for the 1973-74 academic year show that almost 34 per cent of some 28,000 professors at Canadian universities were not Canadian citizens. Almost 15 per cent were non-Canadian, 8 per cent were British and the rest came from various other countries.

Although CAUT guidelines lack formal legislative authority and are presented as recommendations, CAUT officials believe that their ratification will have considerable effect on university hiring policies.

France

Big changes ahead—but softly, softly

from George Morgan

PARIS
There is to be no *réforme Soisson* for French higher education. The *loi d'orientation* promised by M Jean-Pierre Soisson, Secretary of State for Universities, shortly after coming to office in June last year will not take place: anxious to avoid a political storm of the kind which has beset the plans of M René Haby, Education Minister, for modernizing compulsory education, M Soisson has decided against submitting a bill for parliamentary scrutiny.

The decision, however, implies a change of strategy rather than of long-term objectives. M Soisson remains committed to reform but he has decided to implement policy by decrees and ministerial orders. This means that he will be able to introduce significant changes within the general framework of the 1968 law without avoiding the dangers inherent in a legislative debate.

A number of the measures envisaged are closely tied to the proposed reform of secondary education. This is the case in particular with his plans for university admission. The *baccalauréat* will take place a year earlier than at present and will be a terminal year will be devoted to pre-university specialization and to the drawing of "academic profiles" intended to show prospective students major fields of interest and ability. M Soisson has now dropped the idea, however, of selective admissions policy. The universities will not be empowered, as originally planned, to decide their own entrance requirements. Selection, the Minister told me, was economically, socially and politically undesirable.

There are still hopes of avoiding the massive selection by failure which results in over half the students in French universities leaving with no qualifications.

More emphasis is to be given to informing students and lycées of the prospects open to them at university and beyond in an attempt to divert them into the field in which they have the greatest aptitude, where short courses are available; 103,000 students took courses in 1973, as many as in the first 25 years of SENAI's existence, from 1942 until 1967. In the early years, however, the great majority were three to four year full-time or sandwich courses, so perhaps the comparison is unfair.

SENAI enjoys a very close relationship with industry, whose representatives are consulted during planning for new courses and machinery. SENAI's income is 80 per cent of funds are returned directly to the state of origin, the remainder is distributed to the more backward areas of the country, such as the north east. This is one of the ways by which Sao Paulo and the south can pay back their debt to parts of the country from which so much of their human and material resources come.

Another feature of university entrance which will come in for ministerial attention shortly is the opening up of places to non-bacheliers, mature students who do not possess the required minimum qualifications. An official report out this month recommends easier access to universities and *grandes écoles* for non-bacheliers to have at least three years' professional experience behind them. It also urges the replacement of the existing university entrance exam by a number of aptitude tests and interviews.

Future generations of students in higher education will discover a completely renovated pattern of university diplomas. Begun by a former minister, M Joseph Fontanet, the new system involves a pyramidical structure with three two-year courses.

Despite earlier doubts, the reform of the first cycle leading up to the controversial DEUG, or general studies degree, is to stay. This means that plans for a two-year licence course have now been shelved.

The reform of the third cycle announced last year is to become operational in October this year. In future, doctoral students will be required to pass a one-year diploma course before being allowed to move on to their thesis, a three-year maximum is also to be placed on research.

The pattern was completed last month with the publication of details concerning the second cycle. From October this year, the licence, normally a three-year course, will be replaced by the *licence*, a two-year course, followed by a *diplôme*, a total of four years' study.

The *licence* has been in existence since 1967 but it has never enjoyed the prestige of the *licence* which benefitted from being the traditional qualification for recruitment into the civil service and other

Jobs. The licence will remain for several years as a transitional measure.

Ministerial policy will in future demand a much closer coordination at master's level between universities and business and industrial interests. Before being authorized to offer *maîtrise* courses, university departments are being required to submit details of the projected course and to submit a list of possible career openings for future graduates.

Mr Preston reported that the University Grants Committee had not acted on the proposal to float a loan for the UWI and this had forced the university to consider taking sanctions against the recalcitrant territories.

Last late year it was decided that although students should be sent home the UWI was too big to the smaller territories the urgency of the financial situation. Elsewhere in his report Mr Preston dealt with other questions of money. The UWI was being "harried" by representatives of the academic and other staffs for settlement of salary claims. Mr Preston said that unless money was made available for university salaries to be restored to their former purchasing power, staff were likely to leave.

Mr Preston was pessimistic about the effects of "oil growth". "Council has had on more than one occasion to bear the burden of hearing from the university officers the near disastrous consequences which our present steady state situation has been having. It has been emphasized time and time again that the university cannot be expected to perform the role which is required of it and which is necessary in our developing community, unless the entire university staff and the administration, are imbued with a sense of being involved in a developmental exercise involving vision and purpose."

Mr Preston hinted that an absence of drive and energy in the university had been noticeable in recent years. "If we do not move forward now, if we do not discover new knowledge, make new friends, build up new relationships, the spirit of enquiry, dedication and service which was so noticeable in our early years, confirm to our students that we are an institution of high quality and standards, that our staff are of the highest calibre and so inspire in them similarly high ideas and respect for knowledge and dedication to service, we cannot but fail."

Another area which will be receiving M Soisson's attention is the coming months concerning student involvement in the administration of the university. First introduced in the wake of 1968, "participation" has declined steadily over the past five years. The student poll at faculty elections dropped from 52 per cent in 1969 to only 25 per cent last year.

The *loi d'orientation* stipulates that a quorum of 60 per cent is needed before students can occupy all available seats. As this is seldom obtained, student representatives rarely achieve parity on faculty councils with members of the teaching and administrative staff. The Secretary of State is now attempting to reverse the trend. Earlier this year, he called on university students to give wider publicity to the election campaign and to widen their zone of influence to take in the secondary schools.

Another feature of university entrance which will come in for ministerial attention shortly is the opening up of places to non-bacheliers, mature students who do not possess the required minimum qualifications. An official report out this month recommends easier access to universities and *grandes écoles* for non-bacheliers to have at least three years' professional experience behind them. It also urges the replacement of the existing university entrance exam by a number of aptitude tests and interviews.

Future generations of students in higher education will discover a completely renovated pattern of university diplomas. Begun by a former minister, M Joseph Fontanet, the new system involves a pyramidical structure with three two-year courses.

Despite earlier doubts, the reform of the first cycle leading up to the controversial DEUG, or general studies degree, is to stay. This means that plans for a two-year licence course have now been shelved.

The reform of the third cycle announced last year is to become operational in October this year. In future, doctoral students will be required to pass a one-year diploma course before being allowed to move on to their thesis, a three-year maximum is also to be placed on research.

The pattern was completed last month with the publication of details concerning the second cycle. From October this year, the licence, normally a three-year course, will be replaced by the *licence*, a two-year course, followed by a *diplôme*, a total of four years' study.

The *licence* has been in existence since 1967 but it has never enjoyed the prestige of the *licence* which benefitted from being the traditional qualification for recruitment into the civil service and other

Jamaica

VC attacks late payers

from David Walker

KINGSTON, JAMAICA
One of the most serious financial problems facing the University of the West Indies is the failure of the contributing governments to make their payments on time, says Mr A. Z. Preston, vice-chancellor, in his annual report.

During the financial year 1972-73 the shortfall in contributions amounted to nearly £270,000 and last year the UWI had to ask its major paymasters, the governments of Jamaica, Trinidad and Barbados and the Bahamas, for an interest-free loan to tide it over, Mr Preston said.

The deficit was caused largely by the shaky finances of some of the 10 smaller West Indian territories which send representatives to the grants committee that finances the university. Among these territories are the islands of Grenada, St Vincent, Dominica and the Windward and Leeward Islands.

Mr Preston reported that the University Grants Committee had not acted on the proposal to float a loan for the UWI and this had forced the university to consider taking sanctions against the recalcitrant territories.

Last late year it was decided that although students should be sent home the UWI was too big to the smaller territories the urgency of the financial situation. Elsewhere in his report Mr Preston dealt with other questions of money. The UWI was being "harried" by representatives of the academic and other staffs for settlement of salary claims. Mr Preston said that unless money was made available for university salaries to be restored to their former purchasing power, staff were likely to leave.

Mr Preston was pessimistic about the effects

Hints of conformity

While it would be neither accurate nor sensible to compare the process towards some measure of conformity in European higher education with say, the compulsory grading of vegetables which irritates the British housewife, there was nevertheless a hint of a bureaucratic movement towards conformity in the remarks of Herr Guido Brunner in London last week.

Herr Brunner, European Commissioner for Research, Science and Education, argued his case for strengthening links between the member states of the European Community through the free movement and right of establishment of the liberal professions. Herr Brunner has touched on this theme many times in the past, but now he endorsed the right of students to move freely to study where they desired and where places were available, a rationalization which, he claimed, would enable them to beat the numbers game, the restriction on places in over-subscribed subjects.

To some educationalists, his proposals contain a two-edged threat. They see such developments as strengthening the already entrenched attitudes of professional bodies—medicine, law, architecture, engineering, for example, while at the same time putting pressure on the entrance requirements and academic autonomy of the universities.

The first argument is that the development of new courses and qualifications in higher education is always difficult because the professions have standards of entry which must be met. Many professions have traditionally demanded graduate entry and others are moving in this direction, which means that university and polytechnic courses must be geared to meet these requirements.

In any single country, academic innovators and professional bodies can come together to discuss and perhaps accept new and radical ideas about training. But if the free movement of professionals in Europe means that entrance qualifications will have to be settled and agreed between nine different sets of professional bodies, such industry would be lost and new ideas

Worst of both worlds?

Executive heads of Western Europe's universities went to Vienna last weekend to praise the cause of East-West détente between institutions of higher learning. It is not for nothing, at least for the foreseeable future.

Some vice-chancellors, particularly the British and West Germans, insisted that the ideal of academic freedom lay at the heart of the concept of a university. Others, mainly the French and Italians, were for bridge-building on almost any terms. In the event, no vote was taken on changing the constitution of the Conference of Vice-Chancellors and Rectors of the European Universities (CRE) in ways which would

mean Socialist black accusations of cold war undertones. The CRE may now have got the worst of both worlds. After more than 20 years of increasingly flourishing existence, it could be faced with defections and a highly unlikely that the Soviet Union will press for the setting up of the new all-European Association of Universities that was urged by the 1973 Unesco conference of Ministers of Education in Bucharest. The CRE, founded in the early 1950s by a British/Benelux initiative, could then find itself reduced to a rump.

Most of the delegates at Vienna appeared prepared to run that risk rather than embrace what they saw as a phoney rapprochement. That research on Unesco's Social Science Committee should be conducted in the shadow of a cold war, Walker's overview of research in Scotland made no mention of some research into the ownership and control of Scottish industry which the department of Social Science at Strathclyde University, Glasgow, was refused a grant by the SSRC, even though a number of papers had been produced and published.

It is most frustrating that the future of this research is threatened by a lack of finance. A couple of weeks after being refused SSRC funds I received a letter inviting me to participate in the seminar in order to give my views on the kind of research which the SSRC should encourage. Needless to say, I expressed my views; they seem to have had little impact on the SSRC. Yours faithfully, JOHN SCOTT, Department of Sociology, University of Strathclyde.

LETTERS TO THE EDITOR

The role of reason

from Mrs Bernice Martin
Sir—Anthony Arblaster in his reply to my article misunderstands or misrepresents my argument in a number of minor ways which I will not debate here. There are three points however which call for a reply.

The most important concerns the role of reason and objectivity. Of course I recognize the partial and problematic nature of these values. I am no more a dogmatic positivist or a quantitative theorist than Mr Arblaster and I would have thought that the nature of my argument and evidence would have made this clear.

Of course truth is many-sided and perspectives on it are fragmentary, blinkered and socially rooted. But if as academics we do not accept the quest for reason and objectivity, however difficult and incomplete, as our special vocation, then we have only two alternatives—pure relativism or ideological dogmatism—there is no middle position.

The trouble with too many expressive radicals is that they consign their opponents to relativity while claiming dogmatic truth for their own position. My complaint is not that they think they are right (I think they are) but that they use different rules for themselves and their opponents they violate the higher rule which the pursuit of reason and objectivity demands: consistency.

The second point concerns his Cassandrian analogy. If the radicals had only cried doom and woe they could merely have been proved more or less correct by time and

the normal principles of positivist evidence. My point was that seeing the major bastions of capitalism as too strong to attack the radicals created their righteous fury on the major bastion of their own freedom: the university. After all, Cassandria was not responsible for importing the wooden horse.

Thirdly I am surprised that a political scientist should have difficulty with the idea that actions may both fail in their overt intention and have unpalatable unintended consequences. The radicals did not overthrow capitalism, but they did inadvertently act as the cockhanded midwives of bureaucracy.

My final complaint concerns Mr Arblaster's implied correlation between novelty and truth. An argument is not disposed of by labelling it a "dread gibe" nor even by indicating more circumlocutively that it is merely not new. (He might try Frank Parnham for a Marxist treatment of middle class expressive politics by the way.) Here he illustrates one of my points about the distinctive penchant of the expressive radicals for legitimization by newness (carelessly equated with progress) rather than by accuracy or cogency.

It is not impugned either by the fact of having been said before or even because the wrong sort of people (Levin and Oakshott?) have said it.

Yours faithfully, BERNICE MARTIN, Department of Sociology, Bedford College, University of London.

Staff ratios

from Dr Ralph Cooper
Sir—Your recent issues have contained several articles and letters in which loud claims for cost effectiveness by universities are accompanied by implications that university staff believe they outdo polytechnics in the various indices such as the student-staff ratio. If they are as eminently academic as they claim, they should realize that you can't usefully compare two oranges with three lemons.

In other words, the various methods of calculating these indices have apparently never been standardized in details between different institutions. What might appear to be minor details, such as the paid contribution of research students to the teaching load of science and engineering departments, or the teaching and research support given by faculty non-academic staff, is conveniently forgotten in bland quotations of student-staff ratios. Similarly, we do not hear whether massive financial burdens such as late-charge fees on capital provision are included in the various calculations of unit costs.

It is to be hoped that the Department of Education and Science see the need for such standardization before it can begin to judge whether limited resources should be allocated. Equally, your paper could do of great service in these difficult times by progressively exploring some of these statistical and financial technicalities. Let the facts be clear and unequivocal before the slanging starts.

Yours sincerely, RALPH COOPER, Department of Biological Studies, Lancaster Polytechnic, Coventry.

Dip HE difficulties

from Dr I. C. Cannon
Sir—Mr Gutteridge in his sensible article "Too Many Modules Can Spoil the Mixture" (THEES, May 23 comments, *inter alia*, on some of the difficulties over DipHE. One of the major problems of DipHE is the student's unwillingness to study and to learn. It is a student's right that of transferability, given the unique combination of subject areas likely to have been studied.

When all this is added together it is no longer surprising, though it may still be shocking to some sensibilities, that the only university teachers who show any enthusiasm for training courses, conferences and committees on how to teach university teaching are those who see them as opportunities for demonstrating what good teachers they are. The rest of us are either confident teachers who feel that we have nothing to learn from such exercises (which is not to be confused with thinking that we have nothing to learn) or teachers who have no intention of offering us our difficulties and a visual aid to another's display of confidence.

It seems to me that there is a splendid opportunity for CNA and the Open University to collaborate on a national scheme with a diversity of options. Provision for the kind of collaboration already in place to some extent through the Open University and CNA in July 1983. Such a scheme could help to solve some of the problems for people entering higher education part-time and full-time study and between different parts of the country at different points in their lives.

The Open University has considerable resources for developing and testing such a scheme. It could be one of the objectives of the Open University to make public the validation procedures adopted by its university before it was decided that Hereford College of Education should not be amongst the group of colleges to which the university offered validation of its teacher education courses (DipHE, June 6).

The statement in the vice-chancellor's letter to the 42 members of the Hereford-Worcester county education committee raises much more fundamental matters about the procedures adopted by the university in relation to all of its constituent colleges, most of which were not offered validation beyond a certain date in the near future.

What criteria did the university use to select colleges for future validation? How did the university decide whether it should or should not refer to offer validation in the future? Did the university make public the criteria over been used? Did the university invite all the colleges to submit proposals for new courses before announcing its decision to offer validation? Did the university take appropriate steps to examine the quality of the before coming to its decision?

If the vice-chancellor is arguing that a college which has been offered validation by his university is in some way better than one which has been refused validation, it is surely time that the university should know how it reached a decision in relation to each college. It is also seen to have been done. Yours faithfully, DENIS MCCREADY, 10 Clifton Crescent, Solihull, Warwick.

RENFORD BAMBROUGH on 'The Drift of Change'

Voice of a 'countervailing force'

It is not a serious matter that the chairman of the University Grants Committee should misquote Hericlitus and mis-spell the name of Nietzsche, but it was tedious of him to make these mistakes in the foreword to *The Drift of Change*.

This interim report of the Nuffield Foundation's group for research and innovation in higher education is bound to be read critically, if it is read at all, by those who are referred to in the report as "the countervailing forces within the academic world that make the instituting of changes in teaching a hazardous enterprise and—for those promoting them—sometimes a discouraging one."

I suppose I am speaking as a countervailing force. Certainly I was approaching this booklet with caution even before I saw myself so described. The teachers' natural suspicion of such an enterprise as new sources, and not all of them are as unreasonable or unrespectable as the one satirized by Cornford in *Microcosmographia Academica*: "I don't intend to alter my lectures if I can help it; and, if you pass this proposal, you will have to alter yours."

One of the most powerful sources is the proprietary pride of the practitioners of any art or craft, and the associated conviction that his practice cannot be adequately described, still less legitimately assessed and condemned, by anybody who is not himself a practitioner of greater or at least comparable experience. This mistrust of the mere theorist is liable to be stronger still when it becomes more reflective, when the teacher's understanding of his own problems and practices is mature enough to reveal to him that not even the experienced practitioner can describe in general terms—except possibly in terms that are too general to be interesting or useful—how he does what he does. Accordingly there is resentment against the theorist even when he is a fellow practitioner.

Dr Klaus Clay has never quite been forgiven, at least by his colleagues in the faculty of history at Cambridge (who are admittedly not the most forgiving of men), for publishing a pamphlet on how to lecture. The practitioner who writes a theoretical work is thought to be claiming special excellence at the practice which is the subject of his theory. The congregation feel that they have the right to expect the preacher to be free of the sins that he diagnoses and rebukes, so they take him to be claiming immunity. If they continue to listen to the sermon it is in the confident hope of finding evidence of pride, hypocrisy and other Pharisaic follies.

Whether the theorist practices and preaches or merely preaches, there is another source of resentment against him which will be equally powerful and equally valid. To write a handbook on how to do something is thought to imply that the practice that one is theorizing about is capable of being reduced (the word carries its own charge of emotion) to a set of principles or (worse still) to a budget of tips and wrinkles.

When all this is added together it is no longer surprising, though it may still be shocking to some sensibilities, that the only university teachers who show any enthusiasm for training courses, conferences and committees on how to teach university teaching are those who see them as opportunities for demonstrating what good teachers they are. The rest of us are either confident teachers who feel that we have nothing to learn from such exercises (which is not to be confused with thinking that we have nothing to learn) or teachers who have no intention of offering us our difficulties and a visual aid to another's display of confidence.

'Anecdotal and impressionistic'

This introduction may be thought too anecdotal and insufficiently solemn and scientific to further serious discussion of *The Drift of Change*. But the report itself is largely anecdotal and impressionistic, and is not without its own dash of diffidence; as before an interim report on what the group themselves would probably call a "data area" rather than a "discipline".

The report is doubly a report of work in progress. The members of the group are still engaged in their programme of visits to universities and other higher educational institutions; and within the individual institutions that they have already visited they have found a number of experiments and innovations at various stages of planning and execution.

This report is thus to some extent a supplement to their earlier publications, and especially to the *Five Newsletter* that have appeared since the beginning of 1973. But the group here takes a wider view, and asks some questions of great scope and range about the present, recent and future attitudes of universities and their staffs towards teaching, education and learning. How much change is taking place? Are there any patterns?



terms linking changes in different fields and on different campuses? How much scope is there for cooperation between departments and between institutions? Who or what are the sinister countervailing forces?

In the opening chapter, *The Present Picture*, the report seems a little ingenuous (since we cannot suppose it to be distinguished) when it notes with surprise that new universities have done comparatively little that is new in the way of teaching techniques and curricular planning. Founders of new universities are drawn from old universities (often from very old universities) and many of them will continue to do in new towers what they formerly did beneath old spires.

Others will do at Seaford or Churchtown something different from what they were made to do at Camford or Smokestack; but very often what happens is that the refugees from Smokestack do at Churchtown what has for decades or centuries been done at Camford or Cottonville, or the creative pioneer from Cottonville introduces into Seaford the Camford of higher education that his late colleagues or the senior faculty have prevented him from practicing or malpractising at Cottonville. And this diagnosis passes over several other influential sources of recruitment to new universities that would not be likely to lead to reforming zeal: sheer restlessness, or a desire for promotion, professional pomp, or power.

Others will do at Seaford or Churchtown something different from what they were made to do at Camford or Smokestack; but very often what happens is that the refugees from Smokestack do at Churchtown what has for decades or centuries been done at Camford or Cottonville, or the creative pioneer from Cottonville introduces into Seaford the Camford of higher education that his late colleagues or the senior faculty have prevented him from practicing or malpractising at Cottonville. And this diagnosis passes over several other influential sources of recruitment to new universities that would not be likely to lead to reforming zeal: sheer restlessness, or a desire for promotion, professional pomp, or power.

Radical proposals 'ignore experience'

To any widespread practice in teaching or curricular design there are no practicable alternatives except other widespread practices. Universities can choose between single honours, double honours, general honours, pass degrees, course-credit systems, and various combinations of elements from them. Radical proposals are seldom made in universities of any age, and are never carried out; and rightly so, for nothing could be wholly new without being wholly misguided, since it would necessarily ignore centuries of laboriously gathered experience.

Of course I hope and believe that my physician uses all the latest drugs, once they have been fully tested, and that my surgeon will cut me with the most advanced and effective scalpel, if it has been well tried; but I trust that he will regard these as refinements of the means by which he pursues the same ends as Galen or Hippocrates.

The same goes for teaching the mind as for cutting and curing the body. If closed circuit television is useful at all, it is useful because it subserves objectives that we have had in view since at least two millennia before it was invented. Now that it has been invented there is a much greater danger that it will be used in too many lecture rooms and laboratories than in too few, just as there is a greater danger that too many patients rather than too few will be dosed with penicillin or thalidomide. The Open University has been ingenious in its use of visual aids for subjects such as philosophy, for which they are unnecessary and inappropriate, but it has never been able to disguise the fact that such devices arise from and minister to the medium and not the message.

The same goes for institutional tinkering as for technical gadgetry. This is a point that the Nuffield investigators have only half seen, and hence the good that will be done by their report will be incidental to their more specific intentions. Their mistake is not in thinking that something needs to be done, but in a confusion over what is called for and how it is to be achieved. They are doggedly in tune with the times, with the spirit that causes the leading educational journals in the United States to be tendentiously entitled *Change*.

Even when they announce a simple and familiar truth, it is liable to be done with a sense of startled discovery, so that this sentence from page 30 is honoured with a reneil

tion in italics on page 31: "New schemes rarely arise from the casual deliberations of committees, and less often than one might expect from convincing demonstrations of a systematically researched need."

Of course not. If the stingo has been reached where there is a willingness to research a need, even unsystematically, then that need has already pressed the consensus or consensus of some of those concerned, who will often be able to influence others in the desired direction without using any apparatus that their university does not already provide. New papers can be added, new topics added to old papers, new options introduced, seminars substituted for lectures, or distinctions for examination papers, within the ordinary give and take of the ordinary conduct of faculty, departmental and university business. Such things often need to be done, and at least as often are done. It is true that they are not always done when they ought to be done, but it is also true that they are often done when they ought not to have been done.

But what is most important for the health of higher education has nothing to do with new schemes at all. The good that this report itself will do is to be looked for on altogether different lines. The group is right in thinking that it would be better if we were all more consciously and conscientiously aware of our capacities and incapacities, responsibilities and irresponsibilities, and that the awareness would help us to fulfil our high calling. We shall do less of this thinking than we should if we are not prompted or provoked, and we need these promptings and provocations far more than we need lectures on lectures.

If there is any need for lectures on lectures at all it is because they, too, can serve as such a stimulus, even to the sensible majority who have no intention of attending them. And the work of the group will serve and is serving as a similar stimulus. The report speaks of the encouragement that the group's visits have given to lonely pioneers. They might also have claimed credit for disturbing some dogmatic slumbers.

Preacher rather than prophet

What is less clear is whether they understand that their role is again that of the preacher rather than that of the prophet. Their business is not to stare us with systematically researched revelations, but to argue the case for the way we know, to lead them into articulating their own understanding of what they are doing and so to help themselves and others in ways too subtle and informal to be embodied in the conclusions of any committee or commission. The report may thus be fulfilling its function even when it prompts discussion that is far beyond its ostensible scope, as some of what I have been suggesting here undoubtedly does.

The report itself shows some awareness of these complexities, and of the direct contribution that self-examination can make, especially if it is called "institutional consciousness." It is more doubtful whether anything useful is achieved by speaking of "interdisciplinary" or "methodological" innovations? or "the ontogenesis of innovation."

The group would have done better to be more loyal to their recognition that teaching is inescapably amateur, and private, so that formal jargon in such contexts "strikes many as pseudo-professionalism without substance." Even a countervailing force likes to meet an object that is not too squishy to offer resistance to its barbs. Otherwise, the "complex" is very much like the plotting of his "defensive innovations" before he has discovered that Essex is challenging the pattern of closed, non-communicating disciplines with a course on the European Enlightenment.

The author is Dean of St John's College, Cambridge.

Examinitis—such sweet terror

The time of year when one half of the nation examines the other half has come round again, and when temporarily I become a doctor. Not, I hasten to add, one of those proper doctors who calm and cure by intoning the magical incantations "There's a lot of it going about" or "I've had it myself", but a peculiar and incompetent doctor who has to deal with one, regularly recurring, irrational, incurable and infuriating disease: examinitis.

For the next month, a track will be beaten by my door by young men and maidens convinced of their imminent failure as human beings, terrified at the wrath of their parents, in fear and trembling of the scorn of their friends. They will exhibit all the symptoms of advanced hysteria, from tears to *anorexia nervosa* ("compulsive fasting, suffering—daily advertisement on back page of *The Times*), from threats of suicide to intimations of instant insanity, and will exercise infinite talents, energy and ingenuity in attempting to blackmail me into guilt, suspension of regulations, sympathetic alcoholism and, even, I occasionally suspect, sexual assault.

And I, poor fool, shall dispense Kleenex and sympathy, neglect my research, establish a permanent line to the Student Health Service and vainly seek justification for my seething intolerance in Jean-Paul Sartre's theory of the emotions.

For the early Sartre (not the later one who loves the Portuguese Army and dotes on the Baudouin-Molotov guerrillas), emotions are not things which suddenly overpower us by an innate and irresistible force. They are devices which we summon to our aid when we want to avoid problems. If I faint when confronted with a burglar, it is not because I am overwhelmed by terror; it is because this is the easiest way of reacting to a situation which I know I lack the guts to tackle rationally.

And I often think, especially just before lunch, that if my students weep and quiver at the thought of sitting for three hours in a room writing about what the taxpayer has subsidised them for three years to learn, this is not because they are genuinely terrified but because they are geyring in a golden opportunity to follow in a plethora of emotions offering the simultaneous thrill of absolute freedom from moral responsibility and the undivided attention of a parentally placed adult.

The symptoms, I would not deny, are genuine. The relief afforded by the modern chemical pharmacopoeia is certainly real as well. But why do the supposedly top minds of the British nation insist on being afflicted by such terrors when all they are required to perform is the routine leap of the final hurdle in a race tailored to their abilities and which they, after all, volunteered to run?

For they must know, if they listen to one tenth of what is told them, that examining (except, I hope, in medicine) bend over backwards to give candidates the benefit of the doubt, and that most students do far better in finals than they—or their tutors—expect.

Why does this self-induced terror stalk unchecked through the campuses and colleges of the United Kingdom, compelling one of our colleagues to sleep in a lean-to and a sweater in order the more quickly to leap to the telephone, and another to keep virtually open house from 6 am onwards in order that his wife may give breakfast to his charges before driving them, quivering in delicious apprehension, to the examination hall?

Partly, as my last phrase and my Sartre analogy suggests, it is because they love it. Liberated though they may be, undergraduates still delight in really strong sensations. And what sensation can be stronger and more enjoyable than a self-induced and apparently absolute terror in a totally secure environment? It is *The Drift of Change*, *Enferno*, *Earthquake*, *Airport 75* and *Deathwish* rolled into one.

Guilt is a powerful contributor. If you have done no work, what more delicious atonement for your sins than the self-flagellation which both involves your future judge and yet strikes at the root of his moral right to disapprove?

But perhaps there is something deeper, of which the very tone of the first part of this article is itself a symptom. The half of the nation that actually takes the examination is old (45+), and the half examined young (18-25). The generation war is exacerbated by the knowledge on the part of the young that the old is to succeed at the tests which the old devise. They thus treat the reassurance that the tests are quite fair with the contempt which such obvious lies undoubtedly deserve. Surely, they argue—and rightly—the old are not going to give up so easily.

Philip Thody

The author is Professor of French Literature at Leeds University.

BOOKS

Complexities of growth

Bryan R. Roberts

United for the apocalypse

Hitler: The Führer and the People
by J. P. Stern
Fontana, 80p
ISBN 0 00 613674 4

Four Hitler biographies of very varied quality have already appeared during the past 18 months so that the publication of one more book on Hitler was not calculated to arouse enthusiasm. But fears of yet another trip down the well-trodden path from *Hitler am Inn* to the Reich Chancellery bunker were allayed by the fact that the author was a distinguished scholar of nineteenth and twentieth century German literature. Indeed, far from being a conventional biography, Professor Stern's book sets out to look "not so much at Hitler the man as rather at the appeal he exercised through his speeches, writings and conversations, through his promises and achievements." The author argues that the key to understanding the Nazi phenomenon lies in the connection between Hitler's beliefs and values and those of German society. Stern sees Hitler as "a representative individual" but one who "presented contemporary thought to the point of no return." What then were the values common to this individual and his adopted society?

The dominant themes, the author argues, derive from the particular character of German romanticism as it had developed during the

nineteenth century: the emphasis on personal authenticity and on self-fulfilment through experience as against the adherence to codes of morality or the dictates of reason; the dominance of the idea of Nature (but now with a biological rather than a poetic emphasis), culminating in social Darwinism; an anti-materialist scheme of private values indifferent to liberty. These themes are then considered in the context of various aspects and events of the Third Reich: propaganda, opposition, the legal system, the Römischer putz and so on.

Looked at from a historian's standpoint, the problem with this kind of approach comes when it moves from the plane of ideas to a specific historical context. For example, from arguing that the notion of conflict and strife are the only value in life lies at the heart of Hitler's thinking, the author goes on to suggest that "much of his political practice will consist in seeking out and creating emergency situations likely to keep the spirit of conflict alive. Here it seems to me lies the meaning of the massacres of June 1934." In other words, instead of the Römischer putz emerging from a major and complex crisis of the régime which gives the nature of the forces involved offered very little alternative to the murder of Röhm. It is implied that Hitler really chose the purge because of his belief in conflict and strife.

Another problem with this approach is that it lacks a concrete social dimension. It is a very undifferentiated view with little awareness of Germany being a society divided into groups and sub-cultures with differing values, outlooks and responses. Few would deny that Nazism was rooted in elements of nineteenth-century thought and could exploit many aspects of German political culture. The author is right to draw attention to German indifference to liberty, though he is wrong in suggesting that historians have neglected it. One of the most brilliant works on German history to appear in English since the war, Leonard Krigel's *The German Idea of Freedom* analyses with great subtlety the emergence of a distinct German concept of freedom.

But although Nazism appealed to certain national characteristics, it had a multifaceted appeal. Different groups responded in different ways to different aspects of it. The author devotes only a page to what he calls "the more mundane explanations and analyses which have helped to form our picture of the Third Reich: economic distress, fear of communism, full employment, hostility to Versailles. Yet one is inclined to wonder whether these were not stronger springs of action for most people than the more rarified ideological explanations he puts forward.

The analysis works best when it is dealing with those who were directly

influenced by debased romanticism—alienated middle class young people and Akademiker for whom "Erlösung" was all and for whom "Erlösung" was an illuminating analysis of the way in which Hitler evolved a political style to exploit these attitudes. But when Professor Stern develops the theory that the aim of indiscriminate annihilation was "the secret that bound his followers to him; and not his followers only," doubts arise. Even if one accepts for the sake of argument that Hitler was not out to dominate the world but made war primarily to satisfy his yearning for annihilation, can one seriously maintain that the coal miner in the Ruhr, the Catholic farmer in Bavaria and the Landser on the Russian front really shared such apocalyptic urges? Was this really why the German people followed Hitler? The attitude of the population on the outbreak of war in 1939 does not suggest that they were eager to join Hitler in a *Götterdämmerung*.

The bases of support for the Third Reich have hitherto received little detailed analysis. Public opinion, particularly before the war, is a largely uncharted field. Professor Stern's book must be welcome even though its ideas are controversial because at last it directs attention away from the purely biographical approach towards the central issue of the Führer and his Volk.

Jeremy Noakes

Malignant policy

Italian Foreign Policy 1870-1940
by C. J. Lowe and F. Marzari
Routledge & Kegan Paul, £12.50
ISBN 0 7100 7987 7

Eight in the series *The Foreign Policies of the Great Powers*, edited by Professor Lowe, this volume lives up to the high standard of academic established by the earlier volumes. It is in two parts, one dealing with policy from 1870 until the advent of fascism, one covering the fascist period to 1940. There is no indication of which author wrote which section, but it seems a reasonable assumption that the first part is Lowe's and the second Marzari's. The initial period, of the 1870s and 1880s, does not provide much, so much so that Professor Lowe makes some sensitive judgments, and traces a clear route through the intricacies of the years when the Triple Alliance came into being. His sympathies lie with the men of the right rather than with those of the left, and especially with the Robilant and Visconti Venosta. There is here the kind of appreciation which Croce felt for the spectacular policies of the party of the right, the successors to Cavour who were not going to risk the kind of gambles he had made with such striking results.

With the arrival of Crispien on the scene a prudently negative policy was replaced by a tragically foolish one, and a strong note of fate enters the story. Professor Lowe shows how Crispien's erratic policy and absurd posturings anticipated many of the blunders of the fascist period: "Practically all D'Annunzio's nonsense about the joys of war can be found in Crispien's writings forty years before."

Professor Lowe's interpretation of Italy's position in the aftermath of the First World War is interesting and convincing. The acquisition of Trieste and a superb strategic frontier in the Aldo Adige were so much more important than "Flume" that only blindness and greed could depict the Italian victory as a "mutilated" one. For Italy to become a revisionist power after 1918 was absurd, and the absurdity brought with it the names of fascism and the disaster of the Second World War.

This theme is taken up in part two, where Marzari summarises Mussolini's foreign policy as one "which was by turns ambivalent, fickle and malignant", one of "servile conflict and to promote his own ends." The exception to Mussolini's record of malignancy is shown to have been the brief period from 1932-35 when he was on the side of stability in Europe, and for the time being stopped Hitler in his tracks. The complex origins and developments of the Abyssinian war, and the subsequent steady and dreadful assertion of Nazi predominance.

There is an unavoidable sadness surrounding the consideration of this book, since one of its authors, Frank Marzari, died before its publication. In a car accident. Both were comparatively young historians—Marzari only 33—and Lowe's contributions to literary and national history already showed him to be a balanced and reliable scholar. Marzari has inevitably left some "completed work," but those of us who knew him when he was a graduate student at the LSE believed him to be potentially a historian of exceptional talent.

Cedric Lowe performed a valuable service to the historical world in getting the book published.

Harry Hearder

Eastern words

A Dictionary of Oriental Literature has been published in three volumes by Allen & Unwin at £5.85 each. They deal with East Asia, South and South East Asia, and Africa respectively and are edited by Jaroslav Prusek. The entries give information about the life and work of the individual writers.

Agatha Ramon

Counter-insurgency

The Communist Insurrection in Malaya 1946-60
by Anthony Short
Muller, £8.95
ISBN 0 584 10157 0

When the Malayan emergency ended in 1960 the Malayan government arranged for the University of Malaya, in the person of Anthony Short, to write its history, giving him unrestricted access to their secret papers. It took him eight years to write it but when he gave it to them they decided not to publish it. It took seven more years of argument to get it into print—and here it is at last, fifteen years after it was begun. Was it worth all this agony and frustration? Has the Malayan Emergency anything pertinent to teach us? I believe that it has.

The Malayan Communist Party organisation was laid bare as no other revolutionary structure has ever been laid bare. Because they fought with such tenacity, the guerrillas were accounted for branch by branch, even man by man. Because of their habit of carrying documents and photographs in their packs, Special Branch built up a personal record of every man and woman in every headquarters, branch committee and platoon in the jungle. Because the Chinese rely so much on their extended families for support, Special Branch also knew a great deal about the party's cadre organisation in the villages. By the mid-1950s they had a similar knowledge of the cell structures among Chinese students, and of the party's organisation for indoctrinating, testing and selection of new recruits.

Where revolutionary parties are open and legal, as in Britain, they do not devote much effort to clandestine structures but if they are banned they do. The theory of such structures is well documented but the student of revolution—whether he sees himself as a revolutionary, or as a counter-revolutionary, or as simply a scholar trying to understand a contemporary phenomenon—has all too little opportunity to study in detail how they function. The Malayan experience analyses him to do so.

It also provides an opportunity

to examine the anatomy of a successful government campaign to defeat a violent challenge to its authority. This challenge was a highly professional one. Even though, as a Chinese challenge, it never had any hope of attracting the support of the Malay majority, it came remarkably close to success. It was a great deal bloodier than Northern Ireland—as many were killed in the worst six months in Malaya as in the last five years in Ulster. It could have become bloodier still, but the government played things down, and never lost its determination to govern. It introduced whatever regulations it considered necessary—not without complaint. By 1953 there were 150 pages of Emergency Regulations covering not just terrorist offences but registration of the population, identity cards, and strict rationing of the jungle. These regulations have been studied by government all over the world.

Many of the lessons are relevant to almost any violent internal conflict. A highly effective single intelligence system was developed—not half a dozen rival ones. Public information services were good. So was the propaganda aimed at the guerrillas and their supporters, and it was run by a team of Chinese not Europeans. The handling of surrendered guerrillas was thoughtful and practical; the aim was to seek their cooperation, not to punish them; and it worked. Perhaps the most valuable lesson for political scientists was the structure developed for joint civil-military control, not only of operations but also of civil measures, such as curfew, registration, food rationing. This ensured that military operations which might have an adverse effect on either police intelligence or public opinion were curbed.

The book is particularly strong on the higher levels of government organisation, though it is said that the circumstances prevented the author from giving references to unpublished documents. For a reference book a fuller table of contents with more explicit subheadings would have been useful, and the author may have checked the index in detail himself—it is not fair to expect professional indexes to know a specialized subject intimately, and the shortcomings are a nuisance. The book should, however, find a place on the shelves of any serious student of British or Asian history or of political violence, for to get an official history of a conflict whose lessons remain highly relevant to the contemporary world.

Richard Clutterbuck

Territorial expansion

War of Illusions: German Policies from 1911-1914
by Fritz Fischer
Chatto and Windus, £12.00
ISBN 0 7011 1972 1

Professor Fischer is especially associated, if not its actual founder, with the school of historians now in West Germany who interpret the history of the German empire as a *Fehlentwicklung* or development in the wrong direction. It is well known that he established his reputation in this country with *Deutschlands Griff nach der Weltmacht* (published here as *Germany's Aims in the First World War*), which convincingly insisted on the continuity of German ambitions for territorial expansion during the war with her ambitions under William II and, by implication, under her claims for *Lebensraum* under Hitler.

This latest volume begins by explaining the economic, social and political situation which developed in Germany between 1870 and 1911 and then recounts in detail the history of the three crucial years leading to the war. It is exceptionally interesting on January to June, 1914—months of intense activity by the brightness of the light trained on July and August. The purpose is to give the detailed evidence on which the assumptions of the earlier book about this continuity were based. At this distance in time it need not be related to the controversy of 1966-67 and its principal virtue may be seen to be its power to treat German history as one single whole: foreign and domestic policy, diplomacy and economics are beautifully fitted together with no sacrifice of accuracy or precision.

The lesson of the book, as indeed it was at *Stagelstein* and *Kriegshandwerk* by Gerhard Ritter, whose verdicts on particular topics Professor Fischer so often cites, is that Germany committed the fundamental error of allowing her military and naval planners to dominate her statements to set the goals of the policy-makers and to close their eyes to the consequences. Fischer, however, goes further than Gerhard Ritter for he blames the statements, and especially Bethmann-Hollweg, for letting this happen. Yet the reader remains uncertain.

Did Bethmann-Hollweg go wrong because he was weak, because the political system, and especially the Emperor's part in it, left him no alternative or because he shared the ambitions of the military and naval planners? Uncertain about the exact nature of the fault, one

is left in no doubt that the fault was Bethmann-Hollweg's. Fritz Fischer does not err on the side of generosity and the reader is tempted sometimes to exclaim "but how do you know?" He writes with absolute assurance that Bethmann-Hollweg's motive for seeking an improvement in Anglo-German relations in 1912-14 was to ensure British neutrality in a possible continental war.

Professor Fischer may be right about Bethmann-Hollweg's motives—how can one know?—but he convinces rather by the confidence and coherence of his interpretation than by unimpeachable evidence. He can give more than enough evidence for the determination to have a war among certain circles in Germany, but does Bethmann-Hollweg's conviction, which Fritz Fischer does document, that war might be inevitable mean that he shared this determination? Where does one draw the distinction between preparing a policy that would prevent war, if possible, and yet make Germany prepared and unafraid if prevention proved impossible?

A possible interpretation is that the motive of avoidance may have been the uppermost up to a certain date and then, being succeeded by the motive of preparation, it changed. Or would Professor Fischer, so far as to argue that Bethmann-Hollweg had as much power to dominate circumstances as Bismarck had (and even his was limited) he would still have prepared an aggressive war of territorial and economic expansion? Much in the argument hinges on the build-up of the case against Russia.

The war Bethmann-Hollweg chose to fight (but did he choose?) was a war against Russia, not a war against Britain or even a war against France; and the initial purpose of the war was gain in the East, the other direction that was still open after attacking in other directions had been frustrated or were disapproved in a way that was galling to people pulsating with the dynamic energy that existed behind the social tensions of 1914.

Professor Fischer's bold and coherent interpretation of Bethmann-Hollweg's motives still gives added interest to his masterly manner in which he disposes the detail in a story whose outline is now generally agreed upon. The translation is marred by small mistakes as "peined up" for "pushed up," "continuously" for "continually," and "to neutralize Britain" for "to cause Britain to be neutral."

Agatha Ramon

Survey of elements

Encyclopedia of Electrochemistry of the Elements, Volume II
edited by Allen J. Bard
Marcel Dekker, £30.00
ISBN 0 8247 6135 9

Electrochemistry is a rapidly expanding discipline of considerable promise and fulfilment, both on the academic side and for industrial application. There is therefore a place for a series such as is represented by this volume, the second member of a sequence which comprehensively surveys the electrochemistry of all the elements and their compounds. The book costs £30 and comprises 515 pages, in which just eight elements are dealt with, namely boron, oxygen, arsenic, niobium, tantalum, rhodium, technetium and copper. At this rate, we would expect to survey the whole of the periodic table in 6.631 pages at a total cost of £384—such a figure would clearly be in the mind of anyone contemplating the possible purchase of these books by their institutional library. The randomness of the eight elements surveyed here (and the 17 surveyed in volume one) seems remarkable and apparently stems from the policy of publishing chapters as soon as enough are received from the contributors to make up a volume. This haphazard approach must necessarily reduce the usefulness of individual volumes to private purchasers.

Topics which are covered in each chapter (where appropriate in the particular element) are: standard and formal potentials in aqueous and non-aqueous solutions, and in molten salts, polarographic and voltammetric characteristics, kinetic studies, experimental studies of electrochemical reactions, electrocatalysis, electrorefining, electrodeposition, corrosion, and batteries and fuel cells. The chapter on oxygen, by J. P. Hoare, is lengthy (191 pages) as befits this important element, and the same applies to copper by V. Bericci and D. R. Turner, at 114 pages. The authors have performed their tasks very adequately and with a book which is well-presented and bound, have produced a useful compilation.

F. A. Hart

Volume three

Encyclopedia of Electrochemistry of the Elements, Volume III
edited by A. J. Bard
Marcel Dekker, £30.00
ISBN 0 8247 6135 9

The *Encyclopedia of Electrochemistry of the Elements* is a series of publications intended to provide a critical, systematic and comprehensive review of the thermodynamics, kinetics and applications of the electrode processes associated with each of the elements and their compounds.

The three chapters in volume three cover the electrochemistry of phosphorus, cobalt and nickel. The length and content of the chapters vary considerably. Unfortunately, these differences seem to reflect only the style and interests of the authors rather than the merit of their topics and the reviews also show surprising omissions. These shortcomings are highlighted by the treatment of nickel and cobalt in this volume; are these metals similar?

References to the literature after 1971 are scarce and the usefulness of the major feature of the book, the many tables of data, is hampered by a lack of selectivity and critical analysis. The reader will commonly have to consult the original literature in order to augment the information supplied and to judge its reliability.

By the high standards set out by the editor, this volume cannot be considered a success and I cannot recommend it. No doubt the price will deter all but the most determined buyer.

D. Dineen

BOOKS

Glassy states

Molecular Behaviour and the Development of Polymeric Materials
edited by A. Ledwith and A. M. North
Chapman and Hall, £12.00
ISBN 0 412 12400 9

In this collection of essays on various aspects of polymer science, questions of preparative chemistry, properties of bulk polymers and reviews on some of the more recently developed commercial polymers are dealt with. As far as possible attempts have been made to relate the topics to molecular properties as the key to understanding of the macroscopic behaviour.

The first three chapters deal with polymer chemistry, treating in turn cationic polymerization, the behaviour of complexed radicals, and initiation by some organo-metallic compounds: these are all useful reviews of areas which have developed strongly in recent years. The book then discusses, in separate chapters, elastomers based on butadiene, elastomers in general, polyolefins and polyurethanes. Each of these has something of interest to offer but the review of elastomers is particularly recommended for its interesting combination of history, commerce, technology and science.

At this point there are two chapters which together constitute the most novel features of the book. One deals with chemical reactions on polymer fibre surfaces. It may not be widely appreciated that the uni-directional orientation and high surface/volume ratio between them control not only the mechanical properties but also such qualities, more difficult to quantify, as wettability, soiling and handle.

A. D. Jenkins

Morass of sines

A Foundation for Quantum Chemistry
by A. R. Denaro
Butterworths, £5 and £2.50
ISBN 0408 70572 4 and 70673 2

Why write yet another book on an introduction to the fundamentals of quantum mechanics? One reason could be a compelling new and original approach, another might be a different way of presenting well tried ideas (e.g. "programmed learning"), yet another reason could be to overcome problems and to rectify deficiencies in existing texts. Also considered which leads in the next chapter inexorably to the hydrogen atom. The treatment of this subject, as with the examples discussed in the earlier chapters, is based on the conventional approach. And here the book ends with no perhaps nor moribund ways of presenting a topic. Unfortunately, this book can offer none of these excuses for having been written. It plods along the well worn basic quantum mechanical path and deposits the chemist (who forgiveably was hoping to learn something about quantum mechanics) on a heap of the hydrogen atom. However the title does promise only foundations, and foundations is what the book contains. An introduction to the ideas of wave mechanics is followed by a whole chapter on the particle in a box by way of example. By restricting himself to the most elementary mathematics the author has ensured that all his derivations and proofs are long, cumbersome and tedious. It may be that every step is written down but the reader is in danger of being engulfed in a morass of sines and cosines, sines and cosines.

D. S. Urch

Survey of reaction dynamics

Molecular Reaction Dynamics
by R. D. Levine and R. B. Bernstein
Oxford University Press, £5.00
ISBN 0 19 855477 X

The microscopic view of the mechanism and rates of chemical reactions is central in the understanding of chemistry. Both experimental and theoretical aspects of reaction dynamics have advanced greatly in recent years, mainly because of the advent of powerful new techniques—such as molecular beam scattering, infrared emission and computer-assisted theoretical work. However, there have been very few authoritative overviews of

This chapter illuminates the importance of reactions at the surfaces of fibres in a way which provides an insight into the kind of research demanded of a fibre-oriented laboratory. The second chapter presents a discussion of the use of polymers as catalysts or reagents in chemical reactions.

The final section contains discussions of X-ray methods of structure determination, molecular motion (relaxation studies), the glassy state, microstructure and drag reduction. The microstructure review shows how well chemistry and materials science can combine in a study of polymer structure while the chapter on "Polymers in drag" illustrates the long period of dormancy that an observation may have to endure before being turned to good, and surprising, use. But outstanding among these reviews is the chapter on the glassy state. This is a superb essay on a subject which challenges thermodynamic description, quantitative evaluation and conceptual ingenuity alike; it provides a closely-argued but balanced discussion which will be of great value to anyone wanting a concise account of the glassy state in polymers.

The book commemorates the work and influence of Professor Cecil Bawn on the occasion of his retirement. Few men have contributed so much to the advancement of any scientific discipline in this country since the war and I am glad to be able to pay tribute to one who has made so many friends in the course of an outstanding career.

A. D. Jenkins

Successive chapters deal with the linear harmonic oscillator, particle on a ring and the rigid rotor. By a careful manipulation of potential energy levels, models are developed which are analogous to bond vibrations and the hydrogen molecule. This enables the quantisation of vibrational energy to be demonstrated. Rotations are also considered which leads in the next chapter inexorably to the hydrogen atom. The treatment of this subject, as with the examples discussed in the earlier chapters, is based on the conventional approach. And here the book ends with no perhaps nor moribund ways of presenting a topic. Unfortunately, this book can offer none of these excuses for having been written. It plods along the well worn basic quantum mechanical path and deposits the chemist (who forgiveably was hoping to learn something about quantum mechanics) on a heap of the hydrogen atom. However the title does promise only foundations, and foundations is what the book contains. An introduction to the ideas of wave mechanics is followed by a whole chapter on the particle in a box by way of example. By restricting himself to the most elementary mathematics the author has ensured that all his derivations and proofs are long, cumbersome and tedious. It may be that every step is written down but the reader is in danger of being engulfed in a morass of sines and cosines, sines and cosines.

The merit of this book lies in the worked examples showing the applications of the conventional harmonic oscillator and rigid rotor calculations to problems of chemical relevance and also for the detailed discussion of tunnelling. As a general foundation for quantum chemistry this book cannot however be recommended since the ground it covers is so limited and those topics which the author does treat are discussed in such laborious detail that the worthy aim of a thorough exposition is well high lost.

D. S. Urch

Chemistry from Longman's University Division

☐ A Guidebook to Mechanism in Organic Chemistry

Fourth Edition
P Sykes
£3.00 net

☐ The Search for Organic Reaction Pathways

P Sykes
£2.50 net

☐ The Dynamic Liquid State

A F M Barton
£2.60 net

☐ Practical Physical Chemistry

Third Edition
A M James and F E Prichard
£3.95 net

☐ Forthcoming

☐ Organic Chemistry

I L Finar
Volume 2: Stereochemistry and the Chemistry of Natural Products

Fifth Edition

£8.00 net

☐ Problems and their Solution in Organic Chemistry

I L Finar
£3.00 net

☐ An Introduction to Conservation of Orbital Symmetry:

A Programmed Text
A J Bellamy
£1.95 net

☐ Findlay's Practical Physical Chemistry

Ninth Edition
Revised and Edited by J A Kitchener and B P Levitt
£4.95 net

☐ General Inorganic Chemistry

Second Edition
J A Duffy
£3.30 net

☐ Physical Data for Inorganic Chemists

M C Ball and A H Norbury
£2.00 net

☐ The Chemical Economy: A Guide to the Technology and

Economics of the Chemical Industry
B G Reichen and M L Burstall
£6.95 net

☐ Selected Experiments in Physical Science

D H Marrow
£3.00 net

To Miss Angela Haines, Longman Group Limited, Longman House, Burnt Mill, Harlow, Essex CM20 2JE
Please send me an inspection copy of the book(s) which I have marked above with a tick, and a copy of your 1975 Higher Education Chemistry catalogue.

Name

Address

 Longman

M A A Clyne

Oxford Chemistry Series

New and recent volumes in this undergraduate textbook series

Fast Reactions

J. N. Bradley
£3.25

Electrode Kinetics

W. J. Albery
£5

Geochemistry

W. S. Fyfe
£4.25 paper covers £2.10

The Chemist in Industry, 2

Human Health and Plant Protection
Edited by E. S. Stern
£3 paper covers £1.60

Heterogeneous Catalysis

G. C. Bond
£3.25 paper covers £1.75

Entropy and Energy Levels

R. P. H. Gasser and W. G. Richards
£3.10 paper covers £1.80

Air Pollution

D. J. Spedding
£2.50 paper covers £1.20

Quanta

A Handbook of Concepts
P. W. Atkins
£6.50 paper covers £3.50

Oxford University Press

John Wiley & Sons Ltd.

**ATOMIC PHYSICS**

by J. Willmott University of Manchester
This undergraduate textbook on atomic physics and quantum mechanics takes as its starting point the position of classical physics at the end of the nineteenth century.
April 1975 372 pages Cloth £8.50 Paper £6.25

INTRODUCTION TO LIQUID STATE PHYSICS

by Clive A. Croxson Jesus College, Cambridge
This book was written in the belief that the theory of liquids is now ready for presentation to a wider and more general audience. Short accounts are presented of irreversibility, phase transitions and transport phenomena, liquid metals, and liquid-crystal systems.
April 1975 298 pages Cloth £9.00 Paper £6.75

MOLECULAR ROTATION SPECTRA

by H. W. Krotz University of Sussex
This book gives a complete and up-to-date introduction to molecular rotation spectroscopy for advanced students and teachers of spectroscopy in chemistry and physics, and all those with a professional interest in rotational spectra and related aspects of spectroscopy.
March 1975 324 pages £9.75

ORGANIC REACTION MECHANISMS 1973: Reprints A & B

edited by Dr. A. R. Butler University of St. Andrews
and Prof. M. J. Perkins Chelsea College of Science and Technology
These reprints of four chapters of the ninth annual volume of a series that is now well established.
June 1975 96 pages Reprint A £1.45 Reprint B £1.45

ELECTROANALYTICAL CHEMISTRY

edited by H. W. Nürnberg Nuclear Research Establishment, Jülich, West Germany
The present volume deals with selected topics in three branches of electroanalytical chemistry—potentiometry and polarography, coulometry and pH-measurements.
February 1975 322 pages £16.50

John Wiley and Sons Ltd., Baffins Lane, Chichester, Sussex PO19 1UD

MAKE SURE

Why take a chance when there is a sure way of obtaining your copy of **THE THES** every week? Place a regular order with your newsagent. You will be helping him and yourself.

BOOKS**For biologists and medics**

Biochemistry
by Lubert Stryer
W. H. Freeman and Co., £9.40.
ISBN 0 7167 0174 X

Principles and Problems in Physical Chemistry for Biochemists
by Nicholas Price and Raymond Dwek
Oxford University Press: Clarendon Press, £5.50 and £2.35.
ISBN 0 19 854129 5 and 854130 9

Biochemistry is a clear and interesting account of the subject with a bias towards fashionable areas such as protein synthesis and X-ray diffraction. It begins with a section "Conformation" on proteins, enzymes, and membranes. "Generation and Storage of Metabolic Energy" is a brief account of "classical" metabolism from the urea cycle to photosynthesis; it is followed by "Biosynthesis of Macromolecular Precursors" and "Information", which is about protein synthesis and nucleic acids and is the best part of the book. The final section "Molecular Physiology" covers immunology, muscular contraction and cell mobility. The book is quite remarkably up to date with an excellent set of references, and some useful problems.

Stryer has taken care to make more of the relationship between biochemistry and medicine than is usual in a book of this type. For example, there is a whole chapter on sickle-cell anaemia, which can certainly be relevant to the student. But, although many biochemists have taken pleasure in identifying rare diseases involving some obscure biochemical lesion, I doubt the value of, for example, the list of glycogen storage diseases in a general course in biochemistry.

The greatest disappointment is the lack of emphasis on experimental methods. Biochemistry remains above all an experimental science; yet the author attaches little importance to methods. Most techniques are woven into the text in an arbitrary way which might make it necessary to read the book from beginning to end to learn how one would go about an experiment. There is only one page on protein purification and this includes the account of both gel-filtration and ion-exchange chromatography. There is little biology—nothing on the structure of the cell and not much on control of reactions or hormones.

The book is very well written and interesting. There are nearly seven hundred diagrams beautifully drawn in five colours and many photographs, which are well chosen and illuminating. A few are perhaps almost too clever: a diffraction pattern of the Parthenon raises as many problems as it solves. I strongly advise students to read this book but not to make it the only one they buy.

Physical chemistry is as important for students of biology as for those in any other science and the only way to learn it is by doing examples and calculations. Many biochemists have difficulty with physical chemistry and cannot see its relevance. *Principles and Problems in Physical Chemistry for Biochemists* is a short account of the basic physical chemistry that a first-year student of biochemistry should know, together with nearly

a hundred problems that have been used in teaching.

The text is clear and concise, it is rather pedestrian in style. It starts with an account of basic thermodynamics, and after a chapter on the binding of ligands to macromolecules, considers the thermodynamics of solutions and properties of electrolytes. The next chapter is about acids and bases and explains clearly how to deal with pH—concept that is supposed to be simplifying but that many students find mystifying. Chemical and kinetic kinetics are covered, and the two final chapters deal with spectroscopy and radioactivity. Relevance to biology is emphasized throughout, but the account is firmly on principles, with many worked examples. In some ways the text falls between two stools: it is too long to be simply revision notes, but too short to be a subject for the first time who needs more amplification and background material.

The best part of the book, and what will make it very valuable for teaching, is the problems. They cover all the text, as well as introducing a few ideas such as hydrophobic interaction and denaturation of molecular weight by gel filtration that are not mentioned in the text. They range from the very straightforward to the advanced, though none are really complicated and almost all of them have a biochemical content. The answers are given very fully, often with explanatory comments.

The book is reasonably priced in paperback, and should be well worth buying for most students: there are none who would not benefit from doing the problems.

Simon van Heyningen

Textbooks

General Chemistry: Principles and Structure
by J. E. Brady and G. E. Humiston
Wiley, £7.25
ISBN 0 471 09530 3

What is Chemistry? A Chemical View of Nature
by Joseph Nordmann
Harper and Row, £6.50.
ISBN 0 06 044854 7

Large increases in printing and publishing costs do not seem to have diminished the rapid flow of elementary textbooks written for the American freshman market. Presumably, students who wish to enrol in medical schools have to take freshman chemistry courses and so this area is still lucrative for the publisher. These attractively produced books are generally of little value as course-books for undergraduate courses at British universities, but they can be a useful source for illustrations and teaching aids. For example, *General Chemistry: Principles and Structure* by Brady and Humiston uses computer generated stereo (three-dimensional) drawings to illustrate a wide variety of molecular phenomena. These pictures when viewed through a simple viewer, which is provided with the book, give the student an excellent three-dimensional impression of closely packed spheres, molecular structures and crystal lattices. The authors have also used these stereo drawings to illustrate the three-dimensional spatial characteristics of atomic and molecular orbitals.

What is Chemistry? A Chemical View of Nature by Joseph Nordmann provides some very useful illustrations and questions for lecturers preparing an environmental chemistry course. It has good line drawings of many industrial processes and photographs which illustrate environmental effects. The book also has many open-ended and "provocative" questions on demography, gene alteration and environmental matters, which would be suitable for tests and tutorials.

D. M. P. Mingos

McGRAW-HILL**NEW EDITIONS IN CHEMISTRY****INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS 4/E**

G. W. EWING

The treatment of magnetic resonance and mass spectroscopy has been considerably expanded in the revision of this widely respected text.

1975 560pp 07 019853 £10.75 approx.

CHEMICAL ANALYSIS 2/E

H. A. LAITINEN

The second edition of this classic text provides significant new material on all major topics.

1975 640pp 07 036086 3 £10.75 approx.

CHEMISTRY: PRINCIPLES AND PROPERTIES 2E

M. J. SIENKO AND R. A. PLANE

A thorough and lucid introduction to university chemistry for those students with some pre-college training in the subject.

1974 650pp 00 000709 9 £5.20 approx.

INTRODUCTION TO QUANTUM MECHANICS WITH APPLICATIONS TO CHEMISTRY

L. PAULING

Once again available as an ISE edition this popular and comprehensive text covers the field of Quantum Mechanics and its application to Physical Chemistry.

1975 468pp 00 000557 6 £3.70 approx.

FOR FURTHER INFORMATION CONTACT

MARK ROBERTS,
COLLEGE DEPT.,
MAIDENHEAD,
BERKSHIRE SL6 2QL

**BOOKS****Counting gains and losses**

Chemistry and the Needs of Society
Chemical Society, £3.00
ISBN 0 85186 218 7

Basic Organic Chemistry, Part 5:
Industrial Products
by J. M. Tedder, A. Nechvatal and
A. H. E. Taylor
Wiley, £12.00 and £5.75
ISBN 0 471 85014 4 and 85016 0

During the first half of this century the sort of problems which required chemical solutions were clearly defined. Infant mortality and tuberculosis served as constant reminders of the fragility of life and the remedies for many infections and diseases were either primitive or non-existent. At times the medicines used caused more harm than good because they were either toxic or had unfortunate side-effects. For example, syphilis was treated using toxic arsenic and mercury compounds. In the inter-war years the synthesis and screening of an incredible number of organic compounds produced some anti-bacterial drugs which helped combat common infections. The work culminated in the preparation on a commercial scale of the "wonder drugs"—the sulphonamides, penicillin and streptomycin during, or soon after, the last war. These drugs decreased the incidence of tuberculosis and many other common infections and diseases. In those successful post-war years it seemed impossible for any disease to survive the ingenuity of the synthetic organic chemists working in the pharmaceutical industry.

In other fields too chemists were making important advances: pesticides and herbicides improved crop yields; polymer chemists produced a wide variety of plastics and paints with properties which were at times superior to those of traditional materials. In addition these products could often be produced very cheaply because they were synthesised from oil bought inexpensively from the Arabs.

In the 1960s the community's faith in the wonder products of the chemical industry was strained by several events. The thalidomide tragedy demonstrated that even modern pharmaceutical products could produce terrible side-effects, and emphasized the need for more careful screening and testing of drugs before they were made available to patients. The accumulation of chlorinated hydrocarbons in birds and mammals indicated that greater care was required in the use of pesticides and herbicides. In addition the United States' savage defoliation programme in Vietnam alienated many young people, especially in America, who began to identify the chemical industry with the "industrial-military complex". The realization that effluent from some chemical factories was polluting rivers and lakes furthered this image of the chemical industry as "a profit at anybody's expense business". Finally, the Middle East war and the enormous rise in oil prices moderated the cheap energy and throw-away philosophy which encouraged the rapid growth of the chemical industry since the war.

In response to this growing unpopularity the Chemical Society organized a symposium entitled *Chemistry and the Needs of Society* to review chemistry's past achievements, highlight possible new areas for important research and give a balanced view of current pollution problems. The lectures which were presented at this symposium have now been printed in a paperback form by the Chemical Society. This book will undoubtedly prove useful for those lecturers who are preparing courses on environmental chemistry, and should be set as essential background reading for all chemistry undergraduates. In the present social and intellectual climate it is important to give undergraduates a broader view of the successes and mistakes of the chemical industry. The book is well balanced with major chapters on resources, food

supplies, health pollution, chemical materials and economic aspects of chemical innovation. Dr Walter's chapter on carbon and hydrogen sources is particularly interesting because it attempts to evaluate the effects of the recent oil price rises on the energy policies of the industrialized countries. In this chapter he makes the important point that three-quarters of all the oil known to exist has been found in the Middle East during the past 20 years and that there is no other remotely similar sedimentary basin in the world.

If the reader's appetite for a knowledge of the chemical industry has been whetted by *Chemistry and the Needs of Society* perhaps he will then turn to *Industrial Chemistry*, the fifth volume in Wiley's *Basic Organic Chemistry* series. This volume gives a detailed and almost comprehensive account of the reactions and processes used in the organic chemicals industry. Following a brief historical introduction and an outline of the major economic factors influencing decisions within the chemical industry by A. H. Jubb, the book describes many industrially important organic reactions. In order to present an accurate and topical account of practices within the industry, the editors have used contributions from over thirty industrial chemists, who have been involved with the processes described. This approach makes the book useful not only to undergraduates and teachers but also to research workers in universities who are interested in relating their research to industrial needs. The book will be particularly helpful in this respect to organometallic chemists, because organometallic catalysts are discussed in some detail in the chapters dealing with petrochemicals.

This book is unlikely to be read from cover to cover, but will serve as a very useful reference work.
D. M. P. Mingos

Tellurium chemistry

The Organic Chemistry of Tellurium
by K. Irgolic
Gordon and Breach, £12.80
ISBN 0 677 04110 1

On suspecting that the new mineral he had found in 1783 contained a new element, Franz Joseph Müller sent a sample to T. O. Bergman, but unfortunately the latter died before he could report his findings. Müller persisted, however, and a further sample sent to Klaproth ensured the identification and isolation of tellurium in 1798.

The first report of an organic derivative of the element is dated 1840, making organotellurium among the earliest of synthetic organic compounds. Despite this early start, the rest of the nineteenth century did not see a total of twenty papers on organic tellurium compounds. In the early part of this century, however, the field was cultivated, and some chemists made remarkably extensive contributions. Thus for example, Lederer published thirty single-author papers in the period 1910-1920. From 1930 to the present time we have seen the exponential growth in publications on organotellurium chemistry that has been so characteristic of organometallic and organometalloid chemistry for the last quarter century. This volume sets out to classify the main areas of organotellurium chemistry, and is a complete account of the literature up to 1971. In such a comprehensive treatise the excellent author and subject indexes are much appreciated, and enable the reader to gain access to data with some ease. After an adequate introduction to general tellurium chemistry, subsequent chapters cover the synthesis and properties of the extraordinary range of organotellurium derivatives currently known.

Physicochemical studies reported cover, infrared, ultraviolet, visible and nuclear magnetic resonance spectroscopy, etc., along with mass spectrometry and diffraction studies. Comprehensive tables of compounds and data make this a valuable work of reference. The author refers to about five hundred scientific papers, and about seventy patents. The latter contain the usual claims of: antiknock agent, additive to crank case oil, insecticide, and sludge inhibitor, that are so beloved of patentees in organometallic chemistry.

The printing of the book is by typescript/offset, with particularly well-presented reaction schemes and diagrams. Apart from a few typographical mistakes, and the odd reference which appears wrongly numbered in the bibliography, the book is very free of errors.

Edward W. Abel

Reviewers

Dorothy Wedderburn is director of the Industrial Sociology Unit, Imperial College, and a part-time member of the Royal Commission on the Distribution of Income and Wealth. Her publications include "Poverty, Inequality and Class Structure" (ed) and "Workers' Attitudes and Technology".

Ernest Gellner is professor of sociology at the LSE. His publications include "Culture and Meaning in the Social Sciences" and the "New in Modern Philosophy".

Richard Clutterbuck is author of "Trust and the Urban Guerrilla" and "Living with Terrorism". He lectures in politics at Exeter University. Jeremy Noakes is co-editor of "Docu-

ments on Nazism 1919-1945", and author of "The Nazi Party in Lower Saxony, 1921-1933".

R. C. Estlin is author of "A Modern Geography of the United States" and "Industrial Activity and Economic Geography" (with R. O. Buchman). He is reader in the economic geography of North America at the LSE.

D. M. P. Mingos is lecturer in chemistry at Queen Mary College. Edward Abel is professor of inorganic chemistry at the University of Exeter and is co-editor of the Chemical Society's specialist periodical report on organometallic chemistry. A. D. Jenkins is professor of polymer science at the University of Sussex.

NEW from Addison-Wesley**CHEMISTRY IN MODERN PERSPECTIVE**

G E Gordon and W H Zoller

This highly readable introductory text for non-specialist students discusses basic chemical principles and relates them to environmental issues. Graduated problems allow the book to be adapted to the needs of the student.
480 pp/224 illus/201 02561 2/£7.15

Second Edition ORGANIC CHEMISTRY: A Concise Approach

F M Menger, D J Goldsmith and L Mandell

This revised second edition covers the principles of synthetic and physical organic chemistry for non-specialist students in biology, medicine and pharmacology. Material is arranged so that the student is handling simple synthesis and has been exposed to organic synthesis by the end of the third chapter.
500 pp/illus/8053 3281 2/£7.15

MOLECULAR BIOLOGY OF EUKARYOTIC CELLS

L E Hood, W B Wood and J H Wilson

This book is designed to develop the fundamental concepts for several different areas of modern cell biology and to provide challenging problems to stimulate understanding of them. Detailed solutions to all problems are provided.
285 pp/illus/8053 9851 1/paper/£4.40

BIOCHEMISTRY: A Problems Approach

W B Wood, L E Hood, R M Benbow and J H Wilson

In this problems-orientated text the classical areas of biochemistry, molecular and cell biology are presented in a way which enables students to learn by doing, in contrast to the traditional descriptive approach. Students will develop a real feeling for concepts by actually working with them in problems, laboratory exercises and learning games.
600 pp/illus/8053 9850 3/£4.40

ORGANIC CHEMISTRY: A Problems Approach

R M Moriarty and C W Jefford

Problem solving sessions held by the authors at the University of Strathburg are set out in this book, which aims to promote a thorough understanding of the principles of reaction mechanisms in organic chemistry.
552 pp/illus/8053 5002 0/paper/£7.15

For further information or to request inspection copies, please write quoting title, author and SBN to:



ADDISON-WESLEY PUBLISHERS LTD.
West End House, 11 Hills Place, London W1R 2LR

H. K. LEWIS & CO. LTD.

LEADING SUPPLIERS OF

BOOKS ON CHEMISTRY AND ALLIED SUBJECTS

Catalogues sent on request—state particular interests

136 GOWER STREET LONDON WC1E 6BS

Telephone: 01-387 4282

Classified Advertisements

Index to Appointments Vacant, Wanted and other classifications

Appointments vacant

Universities
Fellowships & Studentships
Polytechnics
Technical Colleges
Colleges and Institutes of
Technology
Colleges of Education
Colleges of Further Education

Colleges and Departments
of Art
Administration
Overseas
Government
Industry
Adult Education
Librarians
General Vacancies

Appointments wanted
Other classifications
Announcements
Exhibitions
For Sale and Wanted
Courses
Holidays and Accommodation
Typing and Duplicating

Universities



Department of Business Organisation

Senior Lecturer or Lecturer in Business Organisation

Applications are invited for the post of Senior Lecturer or Lecturer in the Department of Business Organisation under Professor L. W. Rodger. The successful applicant will be expected to teach organisation and administrative theory within the departmental programme up to Honours level. Candidates should preferably have both industrial experience and a behavioural science background. An interest in business policy and planning studies will be an added advantage.

Lecturer in Marketing/Marketing Research

Applications are invited for the post of Lecturer in Marketing/Marketing Research in the Department of Business Organisation under Professor L. W. Rodger. The position involves teaching marketing at undergraduate and postgraduate levels and would be of particular interest to a candidate with experience of or a wish to develop course work in Marketing Research with special reference to quantitative approaches. Candidates may have specialised in Consumer Marketing, or Industrial Marketing, or International Marketing, and should preferably have business or industrial experience.

Salary Scales (under review):
Senior Lecturer £4,707-£5,844
Lecturer £2,118-£4,896
Threshold payments are in addition. Superannuation under U.S.S.

Further particulars of these appointments may be obtained from the Office of the Secretary to whom completed applications should be submitted not later than 24th June, 1975. Please quote Reference No. 1/49/2000.

The Secretary, Heriot-Watt University, Edinburgh EH1 1HX.



LECTURER IN SOCIAL PSYCHOLOGY

Applications are invited for a Lecturer in Social Psychology in the Department of Social Science. Candidates should have an interest in any area of social psychology, or in the teaching of psychology from a social perspective; experience in teaching research methods would be an advantage. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Loughborough University, Loughborough, Leics. LE11 3TU.



JUNIOR LECTURER IN FRENCH

Applications are invited from candidates who have a degree in French, or in any area of French studies, and who have specialisation in the fields of French literature, history or culture. The successful candidate will be expected to teach French at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dublin, Trinity College, Dublin 2.

THE OPEN UNIVERSITY PART-TIME TUTORIAL AND COUNSELLING STAFF

Applications are invited for the following part-time posts to take effect from January, 1976:

COURSE TUTORS and TUTOR/COUNSELLORS

In 1976 the University will be offering 99 courses in six broad areas: Arts, Educational Studies, Mathematics, Science, Social Science and Technology. The courses are based on an integrated structure of correspondence assignments, radio and television broadcasts and a regionally organized tutorial and counselling system.

COURSE TUTORS are responsible for commenting on and grading students' written assignments, for replying to queries about students' work and for conducting tutorials, normally at local study centres.

TUTOR/COUNSELLORS have duties similar to Course Tutors above in relation to the tuition of a group of students on one of the five Foundation courses. They also have counselling responsibilities for a larger group of students on both Foundation and higher level courses, where they are required to give study advice to individual students and to help in organizing discussion groups at local study centres.

The time needed for University duties varies according to individual contracts, but on average will occupy perhaps one evening per week or its equivalent for most of the year. Appointments will be tenable for one year.

Applicants should be graduates with recent teaching experience in further, adult or higher education. To obtain application forms and further particulars send a POSTCARD to the Tutors Office (THEO), The Open University, PO Box 82, Walton Hall, Milton Keynes MK7 6AU. Early application is advised and completed application forms should be submitted to one of the University's Regional Offices by Friday, 20th June.

University of Oxford Careers Advisor

Applications are invited for the post of Careers Advisor to join the interviewing staff of the Oxford University Appointments Committee.

The work consists of interviewing graduates and undergraduates to help them decide on career fields which will suit them. It also includes the development of specialised knowledge on different career fields, and the maintenance of close contact with employers and with the Academic staff of the University.

The position is open to men or women graduates in any subject. The preferred age is 25-45. The salary on appointment would be in the range £2,347-£5,430 (threshold included). Closing date 27th June, 1975. Write for further details to: The Secretary, Oxford University Appointments Committee, 56 Banbury Road, Oxford.

ABERDEEN UNIVERSITY JUNIOR LECTURER IN HISTORY

Applications are invited for a Junior Lecturer in History in the Department of History. The successful candidate will be expected to teach History at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Aberdeen University, Aberdeen, Scotland.

SAINT DAVID'S UNIVERSITY COLLEGE LAMPETER Careers Adviser

Applications are invited from graduates for the post of Careers Adviser from 1st October, 1975.

Salary within the administrative staff grades (A1/A2) £2,118 to £4,896 plus threshold payments, with an initial salary at a point appropriate to qualifications and experience.

Experience of counselling and group work and an interest in helping students overcome personal problems will be considered an advantage.

Applications, giving details of age, education, qualifications and experience, together with the names and addresses of three referees, should be sent by not later than 28th June 1975 to the Secretary, Saint David's University College, Lampeter, Dyfed, from whom further particulars may be obtained.



JUNIOR LECTURER IN MICROBIOLOGY

Applications are invited for the above position. Preference will be given to candidates with experience in animal virology. Salary scale: £2,572-£3,190 (under review). Marriage and child allowances are paid and there is a non-contributory pension scheme. Further particulars and application forms may be obtained from:

The Staff Secretary, West Theatre, Trinity College, Dublin 2.

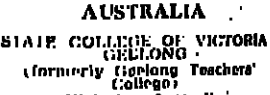
who will receive completed applications up to Friday, 11th July, 1975.

ABERDEEN UNIVERSITY RESEARCH ASSISTANT IN POLITICAL SCIENCE

Applications are invited for a Research Assistant in Political Science in the Department of Political Science. The successful candidate will be expected to assist in research and teaching. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Aberdeen University, Aberdeen, Scotland.

ABERDEEN UNIVERSITY JUNIOR LECTURER IN STATISTICS

Applications are invited for a Junior Lecturer in Statistics in the Department of Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Aberdeen University, Aberdeen, Scotland.



JUNIOR LECTURER IN MICROBIOLOGY

Applications are invited for the above position. Preference will be given to candidates with experience in animal virology. Salary scale: £2,572-£3,190 (under review). Marriage and child allowances are paid and there is a non-contributory pension scheme. Further particulars and application forms may be obtained from:

The Staff Secretary, West Theatre, Trinity College, Dublin 2.

who will receive completed applications up to Friday, 11th July, 1975.

ABERDEEN UNIVERSITY RESEARCH ASSISTANT IN POLITICAL SCIENCE

Applications are invited for a Research Assistant in Political Science in the Department of Political Science. The successful candidate will be expected to assist in research and teaching. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Aberdeen University, Aberdeen, Scotland.

ABERDEEN UNIVERSITY JUNIOR LECTURER IN STATISTICS

Applications are invited for a Junior Lecturer in Statistics in the Department of Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Aberdeen University, Aberdeen, Scotland.

Universities continued

AUSTRALIA

UNIVERSITY OF ADELAIDE
Applications are invited for the following appointments:
Senior Lecturer in Pathology. A candidate should have a degree in Pathology and a postgraduate qualification in the field. Salary scale £2,118-£4,896 plus threshold payments.
Lecturer in Pathology. A candidate should have a degree in Pathology and a postgraduate qualification in the field. Salary scale £2,118-£4,896 plus threshold payments.
Further particulars and application forms may be obtained from: The Secretary, University of Adelaide, Adelaide, Australia.

AUSTRALIA THE UNIVERSITY OF NEW ENGLAND Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of New England, Armidale, New South Wales.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

AUSTRALIA UNIVERSITY OF SYDNEY Applications are invited for the post of Lecturer in Modern Greek. The successful candidate will be expected to teach Modern Greek at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Sydney, Sydney, Australia.

BRADFORD THE UNIVERSITY Applications are invited for the post of Lecturer in Geography and Education. The successful candidate will be expected to teach Geography and Education at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Bradford, Bradford, West Yorkshire.

DUNDEE THE UNIVERSITY Applications are invited for the post of Lecturer in Statistics. The successful candidate will be expected to teach Statistics at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, University of Dundee, Dundee, Scotland.

LONDON IMPERIAL COLLEGE SOCIAL SCIENCES Applications are invited for the post of Lecturer in Social Sciences. The successful candidate will be expected to teach Social Sciences at undergraduate and postgraduate levels. Salary scale £2,118-£4,896 plus threshold payments. Further particulars and application forms may be obtained from: The Secretary, Imperial College, London.

Polytechnics continued

Vacancies at

NELP

Faculty of Human Sciences

Department of Social Work, Health & Nursing
Senior Lecturer in Health Visiting. Applicants should be registered Health Visitor Tutors to take charge of the Health Visitors' Course. Candidates should be on the C.E.F.V. roll of Health Visitor Tutors. Teaching experience in a Polytechnic or similar institution is desirable. (Ref. S/AO.2484)

Faculty of Environmental Studies

Department of Civil Engineering
Lecturer II/Senior Lecturer with an interest in one of the following subjects: Concrete and Bituminous Materials, Structural Design, Soil Mechanics. Candidates must possess a degree in Civil Engineering and should be a member of the appropriate professional institution. (Ref. S/AO.2488)

Faculty of Science

Readership in Biology
Applications are invited from Candidates with appropriate research experience for a Readership in Biology, to co-ordinate and promote research work with particular reference to biochemistry. (Ref. S/AO.2486)

Department of Post Graduate Molecular Biology
Research Assistant required to work on the use of Vitamin C and Mg. Citrate in the treatment of human and other malignancies. Suitable candidates will be encouraged to work for a higher degree. (Ref. S/AO.2488)

Faculty of Business

Department of Applied Economics
One year part-time appointment to teach first year economics (C.N.A. degree), whilst undertaking research into the environmental impact arising from social/economic change. (Ref. S/AO.2488)

Salary Scales	Reader	£5,001 - £5,429
	Senior Lecturer	£4,208 - £4,412
	Lecturer II	£2,870 - £4,476
	Part-time Lecturer	£1,335 - £2,238
	Research Assistant	£1,544 - £1,864

(Plus appropriate London Weighting and Cost of Living Allowance)
Further details and application forms: Academic Staffing Office (2), North East London Polytechnic, Forest Road, London E17 4JH. Tel: 01-527 2272, Ext. 157.

Closing date: 27 June, 1975

Please quote above reference no.

North East London Polytechnic

KINGSTON POLYTECHNIC

School of Civil Engineering

LECTURERS IN CIVIL ENGINEERING

There are two vacancies for staff:
(I) HYDROLOGICAL TECHNOLOGY AND MANAGEMENT
Teaching may be up to final degree level, and research/post-graduate study is encouraged. The appointments may be at either Senior Lecturer or Lecturer, II level according to qualifications and experience.

LECTURER/SENIOR LECTURER IN QUANTITY SURVEYING

Applications are invited from suitably qualified and experienced quantity surveyors, with a particular interest in construction technology and service installations, to join a team, teaching on a diploma course having RICS exemption. The course is likely to become a degree course in the near future. Previous experience desirable but not essential. Research and post-graduate study encouraged.
Salary scales: Lecturer II, £2,801-£4,707; Senior Lecturer, £4,437-£5,643, plus London allowance, £287.
Further details and application forms from Appointments Officer, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames, KT5 2EE. Tel: 01-848 3888.

KINGSTON POLYTECHNIC WELFARE UNIT SENIOR WELFARE OFFICER

to manage student welfare, counselling and accommodation services throughout the Polytechnic. The Unit consists of about 10 staff and also provides first aid to students and Polytechnic staff. Applicants should have appropriate nursing qualifications with administrative experience.
Salary scale: £3,821-£4,176 plus £287 London allowance.
Further details and an application form from Assistant Secretary, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames, KT5 2EE. Tel: 01-848 3888.



School of Business Management Studies SENIOR LECTURERS OR LECTURERS

MARKETING

with substantial Marketing experience at a senior level to develop first degree and postgraduate programmes of study.

ECONOMETRICS

with experience and qualifications to develop Econometrics at first degree and postgraduate levels.

BUSINESS FINANCE

with experience in Merchant Banking, Stockbroking, City Institutional Operations or Management Consultancy and relevant degree and/or professional qualifications to develop Business Finance at first degree and postgraduate levels.

Salary on scales up to £7,710 per annum.

Removal expenses assistance.

Details from Director, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen, AB9 1FR.

DUNDEE COLLEGE OF TECHNOLOGY

Faculty of Management and Social Studies

Department of Accountancy and Economics

LECTURESHIP IN ACCOUNTANCY

Applications are invited from candidates who possess a good honours degree (or an equivalent qualification) and who have had appropriate teaching, research or practical experience, for the Lectureship which involves teaching mainly at undergraduate level, with an opportunity to take part in postgraduate and post-experience courses.

The Department is particularly keen to recruit staff with an interest and experience in Financial or Management Accounting or in the development of Management Information Systems using computer techniques.

The successful candidate will have the opportunity to take part in the development of a new degree in accounting.
Salary Scale: Lecturer (A) Scale, viz. £3,216-£5,445 with initial placing dependent upon approved prior experience.
Financial assistance towards the cost of removal expenses may be payable.

Further particulars and application forms obtainable from the Principal, Dundee College of Technology, Bell Street, Dundee, DD1 1HQ, to whom completed application forms should be returned not later than 27th June, 1975.



Principal Lecturers in Accounting, Building Services, Graphic Design.

Salary Scale: Lecturer £3,001 to £5,613 or £6,429 (plus threshold payment)

Application forms and details from:

The Establishment Officer
The Polytechnic,
Wolverhampton WV1 1LY

THAMES POLYTECHNIC

SCHOOL OF CIVIL ENGINEERING

PRINCIPAL LECTURER

Applications are invited from

qualified Civil Engineers having

substantial teaching experience in

Polytechnic or University. The

rank of the School includes

honorary and degree courses and

Higher National Diploma and

Certificate work. Staff are en-

gaged in research and consultancy.

The appointment carries the duties

of a Senior Lecturer who is re-

sponsible directly to the Head

of School for the administration

and organization of the School

and its staff, as well as the

supervision of student welfare and

counselling. There is also an

appropriate teaching commitment.

Salary Scale: £3,001-£5,613 (over-

seas) plus £287 London allow-

ance, currently £220 per annum.

Further particulars and applica-

tion forms may be obtained from

the Secretary, Thames Polytechnic,

Woolwich Road, London SE18 6PF, to whom completed applica-

tion forms should be returned by 23rd

June, 1975.

Leeds Polytechnic

POLYTECHNIC

Department of Life Sciences

SENIOR LECTURER OR LECTURER II

IN NUTRITION/

DIETETICS

Salary Scale:

Senior Lecturer:

£4,208-£5,010

(over £2,870)

Lecturer II: £2,870-£4,476

Plus Threshold

Agreement

Details from:

The Academic

Officer, (ND.13)

Leeds Polytechnic,

Calverley Street,

Leeds LS1 3HE

0532 41101

Closing Date: 4th July,

1975.

MANCHESTER

MANCHESTER POLYTECHNIC

FACULTY OF MANAGEMENT

AND BUSINESS

SENIOR LECTURER

IN MARKETING

AND

ADVERTISING

Candidates should have at

least a good honours degree or

equivalent professional

qualification. They should

have had relevant business ex-

perience and should be pre-

pared to assist with liaison

work in addition to teaching

duties.

Appointments will be made at

Senior Lecturer or Lecturer

grade depending upon quali-

fications and experience.

Salary scales: Senior Lec-

turer, £4,208 to £5,010 (over

£2,870); Lecturer II, £2,870

to £4,476.

For application forms, re-

turn to the Secretary, Man-

chester Polytechnic, 150, 151

and 152, Oxford Road, Man-

chester, M13 9PL.

MANCHESTER

MANCHESTER POLYTECHNIC

JOHN DUNN FACULTY

OF CHEMISTRY AND BIOLOGY

DEPARTMENT OF

CHEMISTRY AND BIOLOGY

Applications are invited for

POSTGRADUATE RESEARCH

work in the following fields:

(1) SYNTHESIS and ap-

plication of novel reaction

systems.

(2) THE RELATIONSHIP OF

CHEMISTRY TO the

environment.

(3) INVESTIGATION OF the

PROPERTIES of novel

materials.

Candidates should hold a

good honours degree or equiva-

lent professional qualification

(or an appropriate

diploma) in Chemistry or Bio-

chemistry or a related subject.

The successful candidate will

be encouraged to take part in

the development of a new degree

in Chemistry.

Salary Scale: Lecturer (A) Scale, viz. £3,216-£5,445 with initial

placing dependent upon approved prior experience.

Financial assistance towards the cost of removal expenses may be

payable.

Further particulars and application forms obtainable from the

Principal, Dundee College of Technology, Bell Street, Dundee,

DD1 1HQ, to whom completed application forms should be

returned not later than 27th June, 1975.

MANCHESTER

MANCHESTER POLYTECHNIC

FACULTY OF MANAGEMENT

AND BUSINESS

SENIOR LECTURER

IN MARKETING

AND

ADVERTISING

Candidates should have at

least a good honours degree or

equivalent professional

qualification. They should

have had relevant business ex-

perience and should be pre-

pared to assist with liaison

work in addition to teaching

duties.

Appointments will be made at

Senior Lecturer or Lecturer

grade depending upon quali-

fications and experience.

Salary scales: Senior Lec-

turer, £4,208 to £5,010 (over

£2,870); Lecturer II, £2,870

to £4,476.

MANCHESTER

MANCHESTER POLYTECHNIC

FACULTY OF MANAGEMENT

AND BUSINESS

SENIOR LECTURER

IN MARKETING

AND

ADVERTISING

Candidates should have at

least a good honours degree or

equivalent professional

qualification. They should

have had relevant business ex-

perience and should be pre-

pared to assist with liaison

work in addition to teaching

duties.

Appointments will be made at

Senior Lecturer or Lecturer

grade depending upon quali-

fications and experience.

Salary scales: Senior Lec-

turer, £4,208 to £5,010 (over

£2,870); Lecturer II, £2,870

to £4,476.

For application forms, re-

turn to the Secretary, Man-

chester Polytechnic, 150, 151

and 152, Oxford Road, Man-

chester, M13 9PL.

MANCHESTER

MANCHESTER POLYTECHNIC

JOHN DUNN FACULTY

OF CHEMISTRY AND BIOLOGY

DEPARTMENT OF

CHEMISTRY AND BIOLOGY

Applications are invited for

POSTGRADUATE RESEARCH

work in the following fields:

(1) SYNTHESIS and ap-

plication of novel reaction

systems.

(2) THE RELATIONSHIP OF

CHEMISTRY TO the

environment.

(3) INVESTIGATION OF the

PROPERTIES of novel

materials.

Candidates should hold a

good honours degree or equiva-

lent professional qualification

(or an appropriate

diploma) in Chemistry or Bio-

chemistry or a related subject.

The successful candidate will

be encouraged to take part in

the development of a new degree

in Chemistry.

Salary Scale: Lecturer (A) Scale, viz. £3,216-£5,445 with initial

placing dependent upon approved prior experience.

Financial assistance towards the cost of removal expenses may be

payable.

Further particulars and application forms obtainable from the

Principal, Dundee College of Technology, Bell Street, Dundee,

DD1 1HQ, to whom completed application forms should be

returned not later than 27th June, 1975.

MANCHESTER

MANCHESTER POLYTECHNIC

FACULTY OF MANAGEMENT

AND BUSINESS

SENIOR LECTURER

IN MARKETING

AND

ADVERTISING

Candidates should have at

least a good honours degree or

equivalent professional

qualification. They should

have had relevant business ex-

perience and should be pre-

pared to assist with liaison

work in addition to teaching

duties.

Appointments will be made at

Senior Lecturer or Lecturer

grade depending upon quali-

fications and experience.

Salary scales: Senior Lec-

turer, £4,208 to £5,010 (over

£2,870); Lecturer II, £2,870

to £4,476.

Overseas

The British Council

invites applications for the following posts:

Director, GCE Programme (Greece)

Athena College
An American-sponsored Greek boarding school with 1,500 boys aged 8 to 19. Graduates preferably with higher qualification and approximately 10 years' teaching and administrative experience to "A" level. Men only, age range 30-45. Experience as Head of Department and some knowledge of modern Greek preferred.

Salary: £5,063-£6,329 p.a. at present rate of exchange. Twenty five per cent paid in dollars outside Greece. Benefits: bonuses; medical scheme; employer's portion of superannuation; assistance with school fees, accommodation provided on campus. Contract for a negotiable period up to 3 years, renewable. 75 SS 133

ELT Adviser (Nepal)

Institute of Education, Tribhuvan University
Materials production, some teaching.
Graduate with qualification in TESOL or applied linguistics and experience of TESL and teacher-training; UK citizen.

Salary: £3,385-£4,264 p.a.
Benefits: overseas allowance; free accommodation; medical scheme; employer's portion of UK superannuation. Two-year contract, renewable. 75 UO 118

Lecturer in English (Cameroon)

Ecole Normale Supérieure, Bamili
To lecture to student teachers on methodology of ELT/ESL plus some English literature teaching. Degree, TEFL qualification and experience, knowledge of French essential. Teacher-training experience desirable. Preferably aged 30-40